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ABSTRACT

This is the final report of a technical assistance project conducted in Swaziland by the American Institutes for Research (AIR) to implement a Project Agreement between the United States Agency for International Development (USAID) and the Government of Swaziland. The purpose of the Project Agreement was to provide assistance in meeting a priority educational need identified by the Government of Swaziland in the "Second National Development Plan 1973-1977" to reform the primary school curriculum. The major goal of the technical assistance project was to provide technical advisory assistance to establish a curriculum development unit within Swaziland, and to develop within this unit a cadre of trained Swazi educators with the capability for development and continued updating of the primary school curriculum. More particularly, this two-year project was focused on: (1) assisting the Government of Swaziland in planning and initiating a fundamentally innovative approcah to curriculum reform for primary school and in creating an institutional capacity for devising the objectives, materials, and evaluation methodologies needed to begin the reform; and (2) determining what further resources were needed to implement a comprehensive program of curriculum reform through this institution, and assisting Swazi educators in preparing proposals to appropriate donors for further assistance. Included are sections on planning conferences, work targets, accomplishments of the project, and workshops conducted through the project. (Author/MS)

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swaziland curriculum and educational materials development:

final report

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Country Background

The Kingdom of Swaziland is one of the smallest nations in Africa, with a population in 1971 of about 400,000 people living within approximately 6,700 square miles (slightly smaller than New Jersey). The country is located in Southeastern Africa and is bordered on the north, west, and south by the Republic of South Africa (Transvaal Province), and on the east by Mozambique. It is a landlocked country, although since 1964 there has been a railway to the Mozambique port of Lourenço Marques.

It is divided into four geographic belts, extending roughly along north-south lines, the Highveld, Middleveld, Lowveld, and the mountainous strip of Lubombo. The Highveld, or Inkangala, averages 3,500 feet in altitude, and contains such beautiful hills that the country is often referred to as a Switzerland of Africa. There are four districts within Swaziland: Hhohho, Manzini, Shiselweni, and Lubombo. Most inhabitants of Swaziland are members of the Swazi nation, though there are some white South African and Eurafrican residents. SiSwati and English are the official languages of the country, but siSwati is spoken by most of the people.

Swaziland was formerly one of the three High Commission Territories, along with the presently independent nations of Botswana and Lesotho. It became independent on September 6, 1968. Since 1921, the country has been ruled by King Sobhuza II, who today has the distinction of being the oldest reigning monarch in the world. Swaziland is a member of the British Commonwealth, the United Nations, and the Organization of African Unity.

The country has an economy which is primarily agricultural, supported by abundant water supplies from its several large rivers. It is rich in mineral resources, including iron ore, coal, gold, tin, asbestos, and silver. There is also a large reserve of timber, such as is found in the Usuthu Forests, the largest man-made forests in Africa.

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PREFACE

This is the final report of a project to assist the Kingdom of Swaziland to plan and implement a reform of its primary school curriculum. It is the result of a series of joint planning efforts between experts funded by the United States Agency for International Development (USAID) working closely with Swaziland educators. The goal of the project is to enhance human resources utilization in Swaziland through the application of innovative educational concepts which increase the efficiency of the primary school educational process.

To implement this project, USAID contracted with the American Institutes for Research (AIR) for the planning and technical advisory services of Dr. Paul F. Cook, the educator assigned to Swaziland for the period April 1973 through August 1975. In carrying out this assignment Dr. Cook was assisted by the advisory support of AIR's Home Office as well as a number of consultants who visited Swaziland under this contract.

Dr. Cook was especially well qualified to serve as Project Director, having previously worked in Southeastern Africa as Deputy Director of the Regional Testing Resource and Training Centre (RTRTC), a related USAID/AIR project serving the selection testing and educational data processing needs of Malawi, Botswana, Lesotho, and Swaziland. From December of 1969 through March of 1973, Dr. Cook served as Deputy Director of the RTRTC. During this time he directed the Botswana Branch Office of the Centre and in this assignment was responsible for RTRTC activities in Botswana, Lesotho, and Swaziland.

Victor J Cieutat

Victor J. Cieutat, Ph.D.
Principal Investigator

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SWAZILAND CURRICULUM AND EDUCATIONAL MATERIALS DEVELOPMENT: FINAL REPORT

CHAPTER 1

OVERVIEW

This is the final report of a technical assistance project conducted in Swaziland by the American Institutes for Research (AIR), to implement a Project Agreement between the United States Agency for International Development (USAID) and the Government of Swaziland. The purpose of the Project Agreement was to "provide assistance to meet a priority educational need identified by the Government of Swaziland in the Second National Development Plan 1973-1977...The need....is to reform the primary school curriculum."

The major goal of the present project was to provide technical advisory assistance to establish a curriculum development unit within Swaziland, and to develop within this unit a cadre of trained Swazi educators with the capability for development and continued updating of the primary school curriculum. More particularly, this two-year project was focused on: (1) assisting the Government of Swaziland in planning and initiating a fundamentally innovative approach to curriculum reform for primary school and in creating an institutional capacity for devising the objectives, materials, and evaluation methodologies needed to begin the reform; and (2) determining what further resources were needed to implement a comprehensive and modern program of curriculum reform through this institution, and assisting Swazi educators in preparing proposals to appropriate donors for further assistance.

Since the Kingdom of Swaziland achieved independence in 1968, the Government has focused its attention and resources toward modifying its educational system to serve national needs. Details of this planning are presented in Swaziland's Second National Development Plan (Chapter XVI, Education and Training, pp. 150-194). This decision concerning a broad reform of the educational system is one which has been initiated by Swaziland, not an educational study team of a foreign donor. This reform movement incorporates present academic programs at the primary and secondary level, vocational training, commercial training, teacher training, and student guidance, as well as a rural education and life-skills program for secondary schools.

These coordinated activities are currently assisted by a number of external donors, with full coordination being under the control and supervision of the Government of Swaziland. These current donors include AID, IBRD, UNESCO, ODA, SIDA, and the British Council. The commitment of the Government of Swaziland to educational reform at the primary level is best illustrated by the following selections from the Second National Development Plan:

> "Government recognizes that primary education is the foundation upon which most further development of our human resources is based (p. 153)."
>
> "The three major aims of expanding enrollments, improving quality, and changing the orientation of curricula are closely interrelated, and there is no doubt at this time that the number of children who benefit from primary education can be increased considerably simply by effecting qualitative improvements in the primary school system (p. 153)."
>
> "Government believes that priority over the Plan period should be given to tackling these problems of low quality at primary level. This is not only because better primary education is an absolute prerequisite for raising the standards of other parts of the educational system, but also because improvements in quality will themselves be conducive to expanded primary school enrollments (p. 157)."
>
> ". . .a widespread and fundamental reform of the primary curriculum will be instituted. . . .new materials and the Curriculum Development and Short Course Centre. . .at William Pitcher College will provide the focus for these activities. . . .Not only will the content of existing subjects be made more appropriate to the local situation, but a programme will be developed for the introduction of teaching in agriculture and other syllabuses (p. 159)."

This commitment of the Government of Swaziland, where expenses for education already command 20 percent of the Government's recurrent budget and 4.3 percent of the GNP, represents a bold position. In the long run, however, it appears prudent even within the constraints of the necessarily fragile economy of an emerging nation. By its emphasis on a rural bias for primary education, the Government recognizes that by the end of the next decade about 60 percent of the labor force will still have a rural basis in spite of the expected growth in employment opportunities within the private sector. And well into the 1980's about 20 percent of the total labor force will still likely be engaged in subsistence farming. The emphasis on primary education is thus of fundamental concern to the successful implementation of the nation's development policies.

In a recent publication of the OLC, John Hanson has emphasized the importance of the role of primary education as follows (Enhancing the Contribution of Formal Education in Africa: Primary Schools, Secondary Schools, and Teacher Training Institutions, American Council on Education, 1971).

> ". . .there is a growing recognition on the part of governments that rural regeneration is the key to economic development, and that schools and rural environments will be altered in mutually supporting directions to accomplish this (p. 11)."
>
> "Although urban population growth is at present excessively rapid, surpassing the capacities of cities to provide either employment or services for new residents, this growth is not rapid enough to absorb increases in population. It must be expected that the absolute number of persons directly dependent upon agriculture for their livelihood will increase throughout the coming decade. This remains true, although most products of the formal school system would prefer wage-earning employment in the modern urban sector of the economy. There is thus a *prima facie* case for harnessing education to agricultural development. It is extremely difficult to judge how schools can be so harnessed, and it is not surprising that schools are frequently charged with paving the highways to the city rather than clearing the pathways to the field (p. 4)."

The probability for success of this educational reform being undertaken by Swaziland is enhanced by a number of factors, both internal and external to Swaziland. The external factors are in the form of intensive technical and capital assistance. Under a recent Development Credit Agreement between the Kingdom of Swaziland and the International Development Association (IBRD), a broad education project is being financed to the extent of $7,137,735. Of this amount, $246,450 will be available for the capital construction and equipment needs of the primary school curriculum project of AID as planned under the present project, and $45,000 will be available for the placement and guidance activities of the related National Employment Service. Details of this assistance are given in the document Appraisal of an Education Project in the Kingdom of Swaziland (Report No. 550-SW, November, 1974).

More important to the probable immediate and continuing success of the reform, however, are conditions within Swaziland. The country is relatively small, having a resident population of about 472,000 citizens living within an area of 6,700 square miles (slightly smaller than New Jersey). Because of this, national programs are more easily managed and their impact is more immediate and visible. Swaziland is a one-tribal nation. Thus, problems of tribal differences and multiplicity of language and dialect, which often hamper development projects, do not interfere with reform strategies. Transportation and communication facilities within Swaziland are reasonable when compared with those in many developing countries. Because of this, information and curriculum materials may be disseminated more quickly and economically among the schools, and monitoring of innovations becomes practical. (Compare this to Ethiopia, for example, where transportation of advisors or materials to some of the more remote schools requires a two-week trip on muleback.)

Even more promising than this setting, however, are the actions which Swaziland has already taken on the basis of its own planning and the initial support provided by AID. The following constitute a brief overview of these events. They are discussed in more detail in the remaining sections of this report.

The Primary Curriculum Unit. The Ministry of Education formally established and staffed the Primary Curriculum Unit (PCU) as of January, 1974. The PCU has been operational from its inception, and training of several local professional counterparts has already begun through a series of six two-week on-site training workshops coordinated with formal and informal on-the-job training.

The National Primary School Curriculum Plan. A National Primary School Curriculum Plan has been developed and formally adopted by the Ministry of Education. It has formed the basis of a request for continued USAID support for its implementation. The Plan presents strategies and guidelines for: curriculum decision making; materials preparation, production, and distribution; pre-service and in-service teacher training; progress reporting and evaluation; and counterpart training. It also contains estimates of personnel and fiscal requirements for its implementation.

Educational goals. Educational goals have been formulated for both upper and lower primary grades. The goals are stated as desired outcomes for students completing the program, and reflect the knowledge, skills, and attitudes to be covered by the new curriculum.

Program coordination. Beginning steps have been taken to coordinate the diverse curriculum programs within Swaziland's primary school system. Progress has been made toward coordinating several programs which previously have been relatively autonomous, thus avoiding duplication of effort, encouraging coordination of goals, and reducing conflict among various plans.

Evaluation. A rationale for curriculum evaluation has been adopted. Instruments have been developed to establish a baseline of student accomplishments for evaluation of the proposed new curriculum program. This instrument development capability is present in the Swaziland National Office of the Regional Testing Centre, recently established under AID support (Contract AID/afr-668). Local personnel have already been trained in this area, both in the United States and through on-the-job training, and the strength of this capability will increase within the forthcoming year.

Materials development. Prototype curriculum materials, in the form of exemplary instructional modules in several subject areas, have been produced by PCU personnel. These trial modules all include the following essential components: specific behavioral objectives; teaching strategies; teacher guides; and evaluation devices. Some have visual aids and student activity materials.

CHAPTER 2

OBJECTIVES

The following seven activities, as specified in USAID's contract with AIR, were directed at "developing and implementing a program of primary-school curriculum reform..." (Contract AID/afr-688, Amendment No. 6, Pages 2 and 3):

1. "define national educational goals and the purposes of the curriculum development program as they relate to primary education."
2. "develop a preliminary statement of instructional objectives for primary education."
3. "establish a framework for the primary curriculum program within the curriculum development center and strengthening the technical resources of the center for this activity."
4. "develop an initial program for accomplishing primary curriculum revisions and reform."
5. "develop minimum prototype instructional materials and methods for evaluating their effectiveness."
6. "devise means of introducing new curriculum concepts into the teacher education program."
7. "determine the need for additional resources in implementing the primary curriculum program and prepare a proposal for any external donor assistance required."

On-site work towards the above seven activities, from April of 1973 through August of 1975, was directed by Dr. P. F. Cook, the Curriculum Advisor assigned to this project by AIR.

2.1 PLANNING CONFERENCE

From 5-16 June 1973, a planning conference was held at Mbabane, Swaziland, to make detailed plans for accomplishment of each of the project activities based on information already gathered by the Curriculum Advisor, and on interviews held then with Swazi and USAID officials. Contract sponsored participants in the conference were: Dr. P. F. Cook, Curriculum Advisor (AIR); Dr. V. J. Cieutat, Principal Investigator (AIR); Dr. D. J. Klaus, Project Advisor (AIR); Dr. C. W. Snyder, Jr., Assistant Director of the Regional Testing Centre and Head of the Swaziland National Office (AIR); and Dr. D. V. Williams, Educational Consultant (Ithaca College/AIR). Representing the Swaziland Ministry of Education at the conference were: Mr. J. B. S. Vilakati, Senior Inspector of Primary Schools; Mr. M. J. Nsibande, Chief Education Officer; and Mr. A. [illegible]. Xaba, Chief Inspector of Schools. Useful contributions were also received from representatives of USAID's Office of Southern Africa Regional Activities Coordination (OSARAC): Mr. C. D. Ward, Regional Development Officer; and Mr. T. G. McDonough, Regional Education Officer.

The following were among the most important accomplishments of the planning conference:

1. Information gathered by the Curriculum Advisor, including present curricula, textbooks, teacher training texts, materials distribution systems, existing educational goals, pre-service and in-service teacher training, financial data, and enrollment statistics, was used to consider the present potentials and constraints related to primary curriculum reform in Swaziland. This information was supplemented during the conference by visits to several primary schools where classroom activities were observed, teachers interviewed, and discussions held with Headmasters and pupils. Schools visited by conference participants were the following: Ezulwini Valley School (SAGM), Elangeni School, and Mbabane Central School.

2. A detailed Work Plan for the remainder of the current project was prepared. The necessary steps and a realistic schedule for accomplishing these steps were established. In preparing this Work Plan, emphasis was given to immediate initiation of critical activities, such as the prepara- of the overall project framework, and the sequencing of all activities to coincide with a gradual improvement in the institutional capability of the Swaziland curriculum development unit later to be called the Primary Curriculum Unit (PCU).

3. Possible curricular strategies, evaluation techniques, and classroom diffusion methods were explored for later use. Consideration was also given to approaches for training local personnel at the PCU.

There was considerable deliberation at the Conference concerning suitable approaches with respect to each project activity. Overall, it was emphasized that the goals, objectives, and methods incorporated into a new primary school curriculum must be those selected by the Swaziland

Government in terms of its own national needs and objectives, with due consideration being given to a cost-effective allocation of its limited resources. The role of technical assistance in the project was to be one of identifying and clarifying options to be considered, along with each of their probable consequences, as well as furnishing training and advisory assistance to further the implementation of curriculum reform decisions once they were made.

The specific approaches outlined at the Conference, with respect to each of the project targets, are summarized in the following sections.

2.1.1 Define national educational goals and the purposes of the curriculum development program as they relate to primary education

The goals of education must be selected to prepare today's youth to cope with tomorrow's responsibilities. The starting point for curriculum reform, therefore, should be with the wishes and expectations of Government officials and leaders. Two official Swaziland Government documents were particularly helpful as fundamental sources of this information: The Philosophy, Policies, and Objectives of the Imbokodvo National Movement and the Second National Development Plan (1973-1977).

Additional information was sought from Ministry of Education officials, and from various educators and community leaders, to assemble a comprehensive statement of the goals of primary education. Samples of comments received are: "It is not clear what the people want," "The parents would like to have knowledgeable children working on the lands," "English is for employment and business," "English mastery should be sufficient to understand and be understood," "The aims of primary education are to open the eyes of the children to the world," and "A system is needed allowing each student to get the most out of school."

Some of the other issues raised during these discussions demonstrate the complex interactions that must be considered during curriculum planning. For example, a potential conflict was identified between the subdued demeanor a child is expected to display in the home and teaching methods which require the child to be active, expressive, and inquisitive in the school. When this dilemma was brought to the attention of the Swazi educators, they felt it could be resolved acceptably by allowing children to behave differently to authority at school than at home, providing the difference in settings could be emphazied. Similar discrepancies were noted in discussing the importance typical teachers attach to being involved in educational change, the age heterogeneity of students in most classes, and the strong existing belief among less educated Swazis that disease and other misfortunes result from witchcraft rather than more systematic and controllable causes.

In order to ensure the completeness of these goals, opinions were elicited that went beyond the basic elements of the cognitive domain. For example, suggestions were sought for affective, perceptual-motor, and other goals of education, as well as those which relate to the more traditional scholastic knowledges or skills. Some examples of the kinds of issues addressed were the following:

Character building. The formation of character is an often unrecognized but extremely important responsibility of education. Many goals within this domain are fairly universal across cultures (e.g., honesty, punctuality, orderliness, patriotism). While they very frequently are examined during pupil evaluation, they are rarely made an explicit part of the curriculum, and thus are not usually outcomes deliberately promoted by the specific classroom lessons and exercises. The innovative approach contemplated will make character building a specific educational goal. Examples of goals already suggested by Swazis in this domain include positive attitudes toward manual labor, respect for agricultural careers, concern for land conservation, and a genuine feeling of national patriotism.

Self-instructional capability. This ability is desirable both for those who terminate education at the end of primary school as well as for those who continue into the secondary grades and beyond. Thus, specific attention must be given to reading skills, study habits, and quantitative concepts. This will allow children to be able to learn for themselves from materials available in their own communities, or from textbooks they will encounter through subsequent formal and non-formal educational opportunities. For example, it may be possible to make problem analysis and other learning skills specific and deliberate components of the new primary curriculum.

Functionally useful content. A particular need in Swaziland, where contributions from the entire population are required to achieve significant economic growth, is for education to reflect functionally useful content. It is thus more important to emphasize life skills at the primary level, such as agricultural methods or simple business mathematics, rather than preparatory skills, such as biological nomenclature or mathematical sets and functions. For the immediate future, at least, priority should be given to health, nutrition, and consumer skills rather than to literature, geometry, or astronomy.

2.1.2 Develop a preliminary statement of instructional objectives for primary education

In the preparation of detailed instructional objectives, the resultant objectives should be clear, specific, and evaluation oriented. Criteria for their preparation should include the following:

More visible educational targets. The objectives of instruction are often easily misunderstood by the parent, pupil, and teacher because the skills they represent tend to be inconsequential when considered in isolation. A child should be able to perform specific and meaningful tasks as a result of his school experiences. They should be ones that he would not have been able to do without those experiences. These achievements should be readily evident to everyone. Being able to read from a school textbook is not as visible an educational outcome as being able to read a local newspaper, a borrowed storybook, or directions on a package. The child should possess more than knowledge about why personal hygiene, proper planting depth, or time-telling is important. He should wash his hands, experience the results of variations in sowing, and display promptness. Every curriculum unit should result in a clear and meaningful behavioral change that can be recognized and appreciated by everyone concerned with a child's development.

More frequent assessment of progress. Classroom testing serves three separate functions. First, it provides a measure of accomplishment for each individual student. Second, it yields diagnostic information to permit the specific and timely correction of identifiable student deficiencies. And, third, it serves as a quality control measure to continually assess instructional adequacy. These functions are all served better by frequent testing than by assessment which occurs only a few times each year, or at the end of several years of schooling. This is not to assert that end-of-term formal (external) examinations are inappropriate. Instead, this principle suggests that information provided by frequent and continuous assessment can usefully complement final and/or external examinations.

It permits early correction of instructional deficits before they become serious. It also allows students to practice desirable skills without unnecessary stress. Most important, it allows students, teachers, and parents to anticipate the outcomes of end-of-term examinations realistically and without undue surprise.

More meaningful test results. The value of education can be misunderstood if tests to evaluate progress are devised more to suit administrative convenience than practical significance. For this reason, and to make educational objectives as clear as possible, tests for instructional units are to be based on the observation of meaningful behavior rather than on traditional paper-and-pencil exercises. For example, students should be tested on practical knowledge of arithmetic by how well they calculate prices and total purchases, or how well they can make change in a simulated shop. In most testing situations, it is necessary to make a practical compromise between educational relevance and statistical reliability. Because the focus of curriculum reform is more on pupils and their parents than on education and researchers, every effort was made to encourage the kinds of measures of pupil performance that will enable everyone, including the parents, to appreciate the value of education.

2.1.3 Establish a framework for the primary curriculum program within the curriculum development center and strengthen the technical resources of the center for this activity

The planning model for primary education was designed to produce the highest possible yield from curriculum reform. Among the goals encouraged were the following:

Relevance to Swaziland. Both the methods and content of the curriculum should be consistent with Swazi expectations and backgrounds. While probably not harmful, a curriculum which includes reading exercises about middle-class European children being served afternoon tea at a country estate would not accent the vocabulary, situations, or constructions that facilitate the learning of English appropriate for use in Swaziland. By using familiar and relevant content, the basic skills that are the goal of primary school will be learned more easily and with greater interest. The problem is more than one of adopting traditional materials by giving them a Swazi flavor. The entire curriculum must be designed to reflect the national goals, interests, aspirations, and cultural traditions now present in Swaziland.

Feasibility for Swaziland. While most teachers in Swaziland are as dedicated and motivated as elsewhere, many lack sufficient formal training. Over one-third, for example, do not have a Primary Lower Certificate. Many have not had sufficient training and experience to implement complicated and demanding teaching routines. There are similar constraints with respect to class size, the availability of audio-visual equipment (or even electricity), the scarcity of classroom supplies, and so forth. The design of a new curriculum, which would take years to implement because of its requirements for teacher training, classroom resources, or school organization, would not represent an acceptable model.

Satisfaction for Swazi children. An often overlooked goal of curriculum reform is its motivational relevance for children of diverse backgrounds and abilities. The purpose of this curriculum reform should be to maximize benefits from school experiences. Even in the absence of multiple tracks or special programs, for very high or very low aptitude students, the curriculum was designed so that no student would waste his time either because he would be unable to understand the lesson or because he would not feel he needed to. Some of the options explored in this respect were the eventual introduction of nongrading, adaptive scheduling, enrichment activities, and flexible standards.

Curriculum development training. No skilled or experienced cadre of curriculum development personnel was available in Swaziland at the inception of this project, and a major effort was to initiate the systematic development of personnel assigned to the PCU as soon as they were appointed. This training was planned for two phases. First, during the initial one or two years, an on-site training program was conducted. This program was work oriented and related to the development of demonstration modules. It followed a formalized schedule and syllabus prepared by the Curriculum Advisor and used consultants provided by AIR. Emphasis during the initial period was given to the more basic needs, such as the preparation of text materials, design of exercises, organization of teacher guides, and evaluation. Training on such techniques as preparing audio-visual aids or developing special purpose materials using programmed instruction and other educational technology was deferred. The possible roles of these techniques were covered, however, so that these materials can be included in the curriculum even though their actual preparation might be accomplished elsewhere. Second, once the basic skills were achieved, and those individuals with the greatest potential identified, more formal, out-of-country programs will be considered.

Teachers as curriculum resources. Every effort was made to solicit the assistance and cooperation of classroom teachers in the design, development, and testing of all new curriculum materials. One reason for involving the teachers was that their combined experience constituted an invaluable pool of ideas for imaginative and effective curriculum stragegies. Another reason was that the teachers who ultimately will implement the new curriculum rightly feel they should be involved in all stages of the preparation of these materials. Still another reason was that the magnitude of work for a thorough curriculum reform is quite large and it is expected that the assistance of teachers in drafting materials will be essential for the program to progress rapidly.

2.1.4 Develop an initial program for accomplishing primary curriculum revisions and reform

Although the immediate goal of this project was to initiate curriculum reform at the primary level, the more important purpose was to create a permanent capability for continuing the process of curriculum revision in Swaziland after the project completion. The program of curriculum reform was thus designed to assure both of these outcomes.

Modularization of units. The development of curriculum materials was organized in the format of separable modules, each representing five to ten hours of learning experiences. This approach accelerated materials preparation by permitting several modules to be developed simultaneously rather than sequentially. It also facilitated the use of alternative instructional strategies at different places in the program, the classroom trials and subsequent revision of materials, and the substitution of new modules to replace a marginally satisfactory or outdated one as the project progressed. Modules also can be more frequently assessed, as described above, and enable available materials to be more effectively used as explained below. The content of modules was defined by the syllabus, which followed from the instructional objectives described elsewhere in this report.

Evaluation emphasis. A major concern of this planned curriculum reform was emphasis on the evaluation process. The opinions of teachers and the attitudes of students, although widely used, are no substitute for rigorous and objective assessment of each new module on the basis of specific criteria. The main questions addressed by these evaluations included the following:

1. Did students achieve the intended objectives?
2. Was their performance while learning as efficient as planned?
3. Were student materials equally contributory to the educational goals?
4. Were the guides and directions for the teachers adequate?
5. Were the audio-visual aids practical and workable?
6. Were the unit examinations effective and diagnostic?

Existing material utilization. Much time and effort are usually required to complete even the first cycle of curriculum reform. Immediate benefits can be obtained, on the other hand, by making the maximum use of existing materials which can be regrouped to meet the needs of the new curriculum. It is not expected that the PCU will embark on a program of creating all new curriculum materials. Available materials will instead be selected wherever possible. Early development efforts were thus focused on those modules where the need for new materials was the greatest.

Cost-effectiveness. The assessment of existing resources for the production of curriculum materials had considerable influence on the selection of instructional strategies, the format of materials, and the variety of materials that were used. Because radio already is being used in many primary classrooms, for example, this resource was more favorably considered as a potential component of future modules than tape cassettes. This is because cassettes would require a major capital investment. Only in cases when the benefits of a new type of teaching aid or instructional approach clearly outweighed the costs were these kinds of innovations considered. For similar reasons, emphasis was given to the systematic evolution of curriculum reform rather than to the use of "instant solutions." There have so far been no panaceas in education, in developing countries or elsewhere.

2.1.5 Develop minimal prototype instructional materials and methods for evaluating their effectiveness

Module preparation. Work was begun on the preparation of several demonstration modules representing a variety of approaches and subject matter. They included features demonstrating the advanced state-of-the-art of curriculum development. These demonstration modules served several purposes.

They were used as illustrative material to acquaint teachers, educators, students, and parents with the type of materials to be prepared and to encourage their cooperation with the program by illustrating opportunities that exist for improving primary education. The modules were used as training materials for PCU personnel. They also provided a means of testing various curriculum concepts in Swazi classrooms to insure the appropriateness, suitability, and thoroughness of these prototype materials. Finally, they constituted a procedure to establish lesson time estimates, teacher guide requirements, distribution limitations, and pupil ability levels.

Module trials. These modules were tried in several classrooms, in draft form, to obtain information about their effectiveness and acceptability. Each of these demonstration modules comprised a complete package, and included the following components: written test materials (pamphlets, books, or separate sheets); activity and exercise material which used indigenous products wherever possible; a teacher guide, including at least brief teacher-training content, plus lesson plans, discussion guides, and related materials; audio-visual support, based on cost-acceptable techniques such as wall posters or battery-operated projectors; and evaluative measures suitable for teacher use.

Baseline testing. The baseline testing for Standard II cognitive outcomes was planned for October of 1975 by staff of the PCU, the Regional Testing Centre, and four primary inspectors. Similar testing, including psychomotor and affective measures, is scheduled for April of each of the following four years. This will help determine how well the existing curriculum materials are meeting the goals of the new curriculum so that new instructional materials can be developed only where most needed. As discussed elsewhere, it may be possible in many cases to adapt and/or reformat existing mateials by adding instructional objectives, teaching materials, and evaluation devices.

2.1.6 Devise means of introducing new curriculum concepts into the teacher education program

This work established opportunities for presenting both in-service and pre-service training. Such training will include demonstration programs, local institutes, specialized courses, and the gradual introduction of the reformed curriculum in ongoing programs at the teacher training institutes. Plans also were made to prepare various training programs. These training programs, however, comprise only one step towards acceptance of the new curriculum by teachers. An equally important factor is the creation of curriculum units within each teacher's ability to utilize and which are visibly and unquestionably effective in fostering student achievement.

2.1.7 Determine the need for additional resources in implementing the primary curriculum program and prepare a proposal for any external donor assistance required

Detailed plans were formulated for the kinds of further technical assistance and training support required to ensure the continued growth of a Swazi capability for curriculum reform, and to ensure that cost-effective strategies for upgrading primary education in Swaziland are not rejected solely because of expense. Plans were completed for donor assistance in the following areas:

1. Technical assistance to continue curriculum reform, coordination of curriculum revision activities, curriculum planning, materials production and distribution, teacher training, evaluation, and related activities.

2. Continued technical assistance for the PCU with respect to its staffing, staff training, and curriculum development efforts.

3. Facilities and resources for the preparation and distribution of primary texts, audio-visual materials, equipment, and apparatus.

4. Expansion of teaching resources available to classroom teachers, such as the use of vans, equipped with generators, audio-visual aids, library materials, and related instructional materials, to visit individual schools on a schedule coordinated with the teaching program.

5. Expansion of the curriculum reform program to encompass adult elementary education. This can be accomplished using the same teachers, classrooms, equipment, and teaching materials to be prepared for primary pupils.

2.2 WORK TARGETS

Sixteen principal work targets were selected to implement the seven basic activities. These were modified as the project progressed. Targets within each basic area were the following. The targets are not ordered in terms of their priority.

2.2.1 Area One: Educational Goals

Define educational goals and the primary curriculum development program.

Target 1. Define primary level goals at the broad national level.

Target 2. Develop a syllabus with outcomes for upper and lower primary, including indicator behaviors for each outcome.

Target 3. Prepare Grade One outcomes.

2.2.2 Area Two: Preliminary Instructional Objectives

Develop preliminary instructional objectives.

Target 4. Prepare instructional objectives organized into a syllabus having modular format.

Target 5. Prepare a baseline test of educational attainment for the end of the fourth and seventh years of primary school (i.e., upper and lower primary).

2.2.3 Area Three: PCU Development

Establish a framework for primary curriculum program development.

Target 6. Establish a Primary Curriculum Unit.

Target 7. Train PCU personnel in-country, using formal and informal methods.

Target 8. Establish a curriculum development library.

2.2.4 Area Four: Change Process

Develop a program for curriculum revision.

Target 9. Develop a framework for curriculum reform, specifying needed resources.

Target 10. Prepare a National Primary School Curriculum Plan and distribute it in summary form.

2.2.5 Area Five: Prototype Materials

Prepare minimal prototype instructional materials and evaluation procedures.

Target 11. Develop demonstration modules for implementation in classrooms with teachers trained in their use.

Target 12. Develop evaluation and data recording procedures.

2.2.6 Area Six: Teacher Education

Plan introduction of new curriculum concepts into teacher education.

Target 13. Plan orientation or in-service training programs for teachers to introduce the new curriculum.

Target 14. Produce and distribute a PCU newsletter to primary teachers.

2.2.7 Area Seven: Proposal Preparation

Determine the need for additional resources to implement the program and prepare a proposal for external assistance.

Target 15. Prepare a project request for external assistance.

Target 16. Liaise with donors for funding of the follow-on project.

The most important targets are those related to the institutional development of the PCU as an indigenous unit for primary curriculum reform within the Ministry of Education. The groundwork of institution building as an ultimate outcome of a responsive educational system, which serves and adapts to the changing needs of Swazi society, was a major developmental goal of this project. AIR recognizes that the educational process extends far beyond the mere development of appropriate curriculum materials, which constitute only one component of a responsive educational system. The establishment of an institutionalized Swazi capability, within the existing educational system, is a much higher and more overriding goal. The ultimate task of Swazi educators is to cause appropriate, reliable learning experiences to take place in the classrooms of the nation. And it is to this ultimate task that our planning efforts were directed.

Effective institution-building clearly requires all of the traditional project inputs: technical assistance, participant training, commodities, capital construction, and evaluation. But it requires more than the simple sum of these elements to assure that the institution remains viable after external assistance has terminated. Much depends on the "character" of the institution, on dimensions that Milton Esman and others have found critical in a variety of countries and cultural settings. The internal mechanisms and the institutions's linkages with the environment are crucial considerations; and on these additional, important dimensions, the necessary beginnings have already taken place.

Throughout this project the emphasis was on planning a fundamentally innovative curriculum development framework. As described later, all concerned groups in Swaziland were involved in the process of curriculum development. This was quite challenging due to the diversity of opinion within the Ministry on appropriate approaches to curriculum development, and the lack of explicit precedents for such activity. Many autonomous and related programs, representing diverse vested interests, had to be coordinated. To establish the PCU as a viable and accepted institution it was necessary to explain programs and concepts to a large number of professionals working in related areas. To assure that the PCU would be effective, a formal system for approving the introduction of new materials was proposed and adopted. This system is explained in detail in Appendix A. A second major focus of the project, to support institution building efforts, was on training the PCU staff. This was assigned a higher priority than the actual production of materials as it was regarded as a necessary condition to assure development of a culturally relevant indigenous curriculum responsive to local conditions and needs.

CHAPTER 3

ACCOMPLISHMENTS

This chapter summarizes project accomplishments with respect to each of the sixteen targets.

3.1 TARGET 1. DEFINE PRIMARY LEVEL GOALS AT THE BROAD NATIONAL LEVEL

In late 1972, an ad hoc National Education Commission was established by the Minister of Education and Health, Dr. P. S. P. Dlamini. The purposes of the committee were broad. One was to "...establish aims and objectives which will serve as the basis of curriculum reform..." At about this same time the Ministry of Education established a Curriculum Coordinating Committee (CCC) to coordinate curriculum reform at the national level. This committee is now chaired by the Chief Education Officer and includes specialists and curriculum development experts from twelve curriculum subject panels, teacher training colleges, UBLS, District Education Officers, The Regional Testing Centre, etc. Appendix B is a copy of CCC Circular 9/1975, and lists broad national goals for primary school which have been approved by The National Education Commission and the CCC. These goals were used by the PCU as one major source for its educational outcomes as described below under discussion of the second work target. The Curriculum Advisor for this project assisted in the preparation of these objectives. He attended selected meetings of the National Education Commission and attended regularly, with the PCU Director, meetings of the CCC. He drafted portions of the CCC document setting out the national educational goals.

3.2 TARGET 2. DEVELOP A SYLLABUS WITH OUTCOMES FOR UPPER AND LOWER PRIMARY, INCLUDING INDICATOR BEHAVIORS FOR EACH OUTCOME

Shortly after the Advisor's arrival in Swaziland an additional curriculum committee was established, the Primary Curriculum Panel (PCP). It was set up specifically to assist with primary school curriculum reform. This panel is chaired by the Senior Inspector (Primary) and has representatives from each subject panel, each teacher training institution, The Regional Testing Centre, Educational Broadcasting Services, District Education Officers, and two representatives from the community. Its Terms of Reference were revised over the first two years of its existence. At its fifth meeting, on 4 June 1975, the Ministry of Education gave the panel the following assignments:

> Advise on all primary school curriculum development activities.
>
> Recommend National primary school educational aims.
>
> Advise on work priorities for the PCU, subject panels, and teacher training programs.
>
> Advise on the coordination of primary curriculum development activities between the PCU and the subject panels, teacher training institutions, and other groups working on primary school curriculum development.
>
> Inform and involve the total educational community in the primary curriculum development process.
>
> Review and recommend approval of new curriculum materials prior to their introduction into schools.
>
> Advise on large-scale production and distribution of materials.
>
> Review evaluation data and advise on improvements in curriculum materials and the supporting systems required to introduce and evaluate the curriculum.

Among the first tasks of this new panel was an assignment to review and approve a list of educational outcomes. The word "outcome" is used with a specific meaning for curriculum work in Swaziland. It is a statement of what a child will know about, be able to do, or have an attitude about when he finishes primary school. It is an educational goal which is more specific than national educational goals but more general than instructional objectives for individual teaching-learning units (modules).

Outcomes lead directly to the more broadly stated national goals for primary school. The outcomes were compiled after talking to many interested groups in Swaziland and after study of relevant national documents such as the Second National Development Plan and the Imbokodvo National Movement policy statement. Some of the groups interviewed were teachers, Headmasters, inspectors, teacher trainers, District Team Meetings, The Swazi National Council, employers in private industry, and educational planners.

Outcomes were developed by the PCU for both upper primary (Std. 3 to 5) and lower primary (Grade 1 to Std 2) school children. They were stated separately for these two levels to provide curriculum workers with a mid-point statement for curriculum scope and sequencing tasks, but not tc indicate a formal distinction between the upper and lower primary school structure. The general focus of the lower primary outcomes is to develop basic skills in language and mathematics and to provide a foundation for continued learning, including the beginning of self-instructional skills, good attitudes, and good behavior. The upper primary outcomes place more emphasis on content, with systematic attention to conceptual and problem-solving thinking, functionally useful skills, and good attitudes and character as demonstrated by student behavior. It is expected that the student will be able to make an active and meaningful contribution to his society at the completion of upper primary.

Outcomes were grouped into three domains along lines of current curriculum development practice. These are the cognitive domain (knowledge and thinking skills), the affective domain (attitudes and character), and the psychomotor domain (physical and manual performance skills). This division was selected to ensure that all aspects of the child's development will be taken into account and because many national goals are of the attitude and skill type.

The outcomes were further divided into conventional subject areas for curriculum development purposes, e.g. siSwati, English, mathematics, science, agriculture, social studies (including geography, history, and civics), domestic science, religious knowledge, music, arts and crafts, and physical education. This subject grouping facilitated communicating with curriculum panels and ensured proper subject-matter coverage. This division does not imply that the new school curriculum will necessarily be organized according to these subject areas. It is planned, in fact, that the new primary curriculum will be an integrated curriculum wherever practicable.

Based on each outcome, five indicator behaviors were prepared. An indicator behavior is an observable behavior of the child which indicates that the outcome has been met. This more clearly defines the level of difficulty and scope of behavior for each outcome. Indicator behaviors do not, however, give a comprehensive listing of all the behaviors implied by the outcomes, but as the name implies they indicate some behaviors which are appropriate.

Attention is drawn to an additional subject area which is called self-learning. This area was added to make certain that appropriate attention in the new curriculum will be given to the development of self-learning skills--that is, those skills needed to learn on one's own, either in or out of school. Life-long education for all is becoming more an educational goal for every country. Self-learning skills are relevant to this continuing education because it provides tools whereby learning throughout a person's lifetime is possible. Also included under self-learning are goals which cut across other subjects and which are based on continuing rather than sequential objectives.

All instruction in the Swaziland primary schools will be designed to achieve these outcomes. Materials which do not directly lead to the outcomes will be considered irrelevant. Instructional materials and methods will continually be improved so that the outcomes are mastered more completely. All curriculum and student evaluation will be based on the outcomes as criteria.

It will be the aim of the new curriculum for every primary school child to master the outcomes. In other words, the list comprises the minimum standard for successful completion of primary school. It is expected, of course, that many children will progress beyond these basic standards. However, a major goal of primary school will be to have every child master these basic outcomes. It is not intended that this list of outcomes be definitive and unchanging. Although the list has been approved by government, it will be updated or revised as required to meet evolving needs and requirements.

3.3 TARGET 3. PREPARE GRADE ONE OUTCOMES

Using the broadly formulated Future Student Outcomes as a guide, terminal outcomes for Grade One are being written by the PCU. These outcomes, referred to as terminal objectives by some writers, follow the same conventions as those for the Future Student Outcomes and are specified for each of the three domains. In order to prepare a complete set of outcomes, the PCU prepared a preliminary scope and sequence analysis of the outcomes for each of the seven years of primary school. At the end of this project draft outcomes had been completed in maths, science, social studies, domestic science, religious knowledge, and physical education. SiSwati, English, Art, and music were still in various draft stages.

3.4 TARGET 4. PREPARE INSTRUCTIONAL OBJECTIVES ORGANIZED INTO A SYLLABUS HAVING MODULAR FORMAT

Work on this activity requires only a preliminary statement of instructional objectives. This was completed with development of the Future Student Outcomes document. The task of specifying instructional objectives for all years of primary school will not be completed until all instructional materials are prepared over the next eight years. Nevertheless, the PCU has proceeded with the formulation of a scope and sequence task for the full seven years of primary school. This was required to ensure that a trial set of the Grade One materials would be completed by January of 1976. Using the Future Student Outcomes as specific targets, draft terminal outcomes have been written in the following subject areas: mathematics, science, social studies, physical education, and domestic science. English, siSwati, religious knowledge, music, arts and crafts are still in various stages of preparation.

In addition to preparing terminal objectives, teaching/learning situations have been described which will orient the child's learning toward knowledge and understanding of his environment and the practice of skills required for environmental mastery and national development. These draft objectives and situations will soon be reviewed by subject specialists and subject panels and then revised. The PCU will publish the revised objectives and situations as the new syllabus for primary school by December 1975. It will be widely distributed to teachers and subject panels. Its main use will be to coordinate divergent curriculum development efforts on the part of panels, teachers, and the PCU. Also, the syllabus will organize the curriculum for Grade One. Instructional objectives for the modules, the most specific level at which they will be written, will directly lead to the attainment of the Grade One outcomes. They will also permit the development of coordinated evaluation devices for the objectives, to ensure proper feedback mechanisms for curriculum developers.

In addition to the Future Student Outcomes and the outcomes being developed for each year of primary school, six instructional modules were developed for practice purposes by the PCU staff (see Target 11 below). Instructional objectives and evaluation devices were developed for each of these modules.

3.5 TARGET 5. PREPARE A BASELINE TEST OF EDUCATIONAL ATTAINMENT FOR THE END OF THE FOURTH AND SEVENTH YEARS OF PRIMARY SCHOOL (i.e. UPPER AND LOWER PRIMARY)

Although this work target was not specifically required, it was felt to be an essential component of an evaluation rationale for the new curriculum. Baseline performance data, measuring how well students presently perform with respect to the new outcomes, are required prior to the introduction of a new curriculum. This is necessary for comparison purposes. Evaluation will be a major component of the proposed continuation and implementation project, to provide curriculum developers with precise feedback on the teaching efficiency of trial instructional materials.

The PCU staff has consulted with local and advisory staff of the Swaziland National Office of the Regional Testing Centre (RTC) who have designed instruments to measure performance at the end of lower primary. S. E. Ramunas, E. A. Robinson, L. Van Hoorn, A. M. Mkhwanazi, E. Mthembu, and T. Ginindza of the RTC have developed these instruments on a part-time basis under the general direction of Dr. C. W. Snyder, Jr., USAID/AIR Technical Advisor serving as Head of the Swaziland RTC.

These instruments measure mastery of knowledges, skills, and attitudes. All tests prepared so far have been devised for the cognitive domain. Because of time constraints the RTC staff was not able to complete the psychomotor and affective instruments prior to the end of this project. The tests will be individually administered to a sample 240 students just prior to the close of school in 1975. The sample will consist of four students, two of superior achievement and two of low achievement, in each of 60 primary schools.

It is estimated that it will take 15 proctors about 3 weeks to complete the testing. Proctors will have to speak siSwati and will be selected from PCU staff, RTC staff, and primary inspectors. A similar instrument will be developed later for the last year of primary school, but such data will not be required for some time as it is not anticipated that a new curriculum for the last year of primary school will be ready for implementation for several years. To assure the relevancy and effectiveness of the seventh year examination, the PCU Director was appointed to the Local Examinations Board of the Ministry of Education and several PCU staff members were appointed as Examiners for the 1976 examination. Steps have also been taken via the RTC project, which is funded by USAID under Contract AID/afr-668, to improve the examination development, administration, and processing procedures (Snyder, C. W., Jr., Dlamini, M. J., & Mkhwanazi, A. M. Swaziland Primary Certificate Examination Programme and Regulations. Mbabane, Swaziland: Local Examinations Board of the Swaziland Ministry of Education, 1975).

The PCU will develop a test to measure the new Grade One outcomes early in 1976. This test will be administered to selected students in Grade One classes just prior to the end of the school in 1976 so that baseline data will be available when the new Grade One curriculum is introduced in 1976. Data from these assessment instruments will not only be used to evaluate new curriculum materials but also to identify curriculum needs. They will help identify places where curriculum changes are required to meet the new outcomes.

3.6 TARGET 6. ESTABLISH A PRIMARY CURRICULUM UNIT

Institution building efforts have characterized activities toward this target. Project direction has focused on establishing the PCU and on initial staff training. Progress is reflected in the institutional development plans for staff, capital construction, equipment, and training over the coming eight year period. These plans were adapted and incorporated into the USAID Noncapital Project Paper (PROP) designated Swaziland Primary Curriculum Development, and are more fully discussed under Target 15 below.

A significant development in the institutionalization of the PCU occurred when its Terms of Reference were formally approved by the Ministry of Education (Appendix C). These Terms of Reference formally established the PCU as part of the Ministry's executive branch under the SI(P). The PCU charter is to execute Government policy regarding primary education, to diagnose educational problems, and to propose solutions to such problems to the Ministry through the SI(P). It thus has a major role in coordinating all primary curriculum programs with the work of the subject panels, as well as being responsible for the design, preparation, production, distribution, and evaluation of all curriculum materials. The PCU also has an influential role in any teacher training associated with the introduction of new materials.

Job descriptions for PCU staff positions, as approved by the Ministry of Education, are given in Appendix D. The PCU staff members, as of the end of the project, are given in Table 1. (All Tables are located at the end of this report).

An important procedure to facilitate coordination between the Ministry of Education and the PCU was initiated as part of the project's institutionalization program. Meetings are held every two weeks with the PCU Director, the Curriculum Advisor, and the SI(P). The CEO joins these meetings once each month. The meetings follow an established agenda and records are kept of all deliberations and decisions.

Miss D. Ahles, a Peace Corps Volunteer, has assisted the Curriculum Advisor in his administrative functions. She has participated in all training activities and has written sample instructional materials. In addtion, she has served as Secretary to the Curriculum Coordinating Committee and supported the PCU Director in his duties as Executive Secretary of the Primary Curriculum Panel. She has also served as the PCU librarian. Although her tour ends in December 1975, Miss Ahles has requested an extension in order to remain with the project for an additional two years.

Basic hard furnishings for the PCU office have been provided by the Government of Swaziland. Contractual funds have supplemented this with two electric typewriters, a super-8 mm movie camera and projector, a laminating machine, an electronic calculator, and several miscellaneous items.

In anticipation of the projected increase of the PCU staff, and the imminent arrival of additional advisors, arrangements were made for larger temporary office accommodations. Present office space at the Hi-Ho Building in Manzini is presently insufficient, and negotiations have been completed for a new location. The World Bank Loan is providing additional office furniture which will be used at the temporary office site and later transferred to the new PCU building at William Pitcher College which will be available approximately December of 1976. The World Bank furniture will consist of desks, chairs, tables, and filing and storage cabinets. Some of the furniture arrived prior to the end of this project and all of it will be available in the near future.

The World Bank Loan will also provide the PCU with eight additional vehicles, i.e., three Chevrolet 2500 station wagons, 1 Nissan Window Van, and four Landrover vehicles with four-wheel drive. The three station wagons will be for the PCU staff, the van for the production center, and one Landrover for each of the Teaching Innovation and Distribution Centers (See Target 13 below). The vehicles will be purchased locally and all will be available shortly after the beginning of the implementation project. The PCU will also have available the 1973 Ford Torino station wagon purchased under the present contract.

3.7 TARGET 7. TRAIN PCU PERSONNEL IN-COUNTRY USING FORMAL AND INFORMAL METHODS

It was initially expected that one or more staff members of the PCU would be sent for overseas training during the planning phase of this project. It soon became apparent, however, that this was not the most effective training approach for two compelling reasons. The first and paramount one was that the PCU staff appointments would not be completed until after January of 1974, well into this initial phase. Second, none of the initial staff had a university level education, and some had not even completed Ordinary-level examinations (i.e., approximately equivalent to U. S. high school). Since curriculum development and evaluation courses are normally taught only at the graduate level in the U. S., and since they usually require an academic background in the fundamentals of educational methods and practices, they were not appropriate for the initial PCU staff.

To initiate early, productive, and relevant training, most of the PCU staff required specialized training of the type not normally available through U. S. training institutions. Such training could be done least expensively and most efficiently by bringing instructors to Swaziland to teach courses tailored to needs of the entire PCU staff, rather than sending only one or two staff overseas for courses not responsive to their needs and for which they would not have appropriate academic backgrounds. This training approach realized substantial savings in transportation, living allowances, and tuition. Further, it enabled all of the PCU staff and many other professional officers in Swaziland to receive training early in the project rather than have the less responsive overseas training limited to a selected few. In addition, on-site training was intrinsically more sensitive to the immediate needs of the local staff, and supervised practice was incorporated as part of the training process.

The above training approach, as set forth in earlier reports for this project, has been followed throughout. Initial training was done in-country rather than at foreign universities or training institutes. A formal in-service program has focused on: establishing skills for meeting work targets; preparing the Future Student Outcomes for the seven years of primary school; writing instructional materials; developing evaluation instruments; planning learning strategies and instructional techniques for materials; selecting module implementation procedures, including the related teacher training aspects; and obtaining feedback on the progress and acceptability of the implementation plan.

Table 2 lists the six on-site training workshops, by whom they were conducted, topics covered, and dates. Reports by the six workshop leaders are attached, as Appendices E through J.

The first two workshops were conducted by Dr. J. G. Schubert of the Washington Office of AIR with assistance from the Curriculum Advisor. Dr. Schubert (Doctor of Arts, Curriculum Development, Carnegie-Mellon University, 1973) has had extensive experience in the areas of curriculum development, educational evaluation, and classroom teaching. She has helped develop an individualized, modular curriculum for vocational and technical training, and has prepared instructional materials for a variety of target populations. She has worked on an evaluation of two African curriculum projects (African Mathematics Program and African Primary Science Program), and has participated in a study to assess the impact of participant training on the attainment of development goals. Prior to joining AIR, Dr. Schubert was a classroom teacher for five years.

The first workshop (18 February - 1 March 1974) focused on the design and development of instructional materials and the production of a demonstration curriculum module. This workshop concluded with a demonstration and discussion of the workshop activities to approximately 30 interested visitors and guests. These included representatives from the

Ministry of Education, and faculty members from the In-Service Teacher Training Program, the William Pitcher College, and the University of Botswana, Lesotho, and Swaziland (UBLS). The reaction was very favorable. The visitors assumed student roles while the PCU staff "taught" them a lesson from the demonstration module on The Origin and Celebration of Five Swaziland National Holidays.

The second workshop (22 April - 6 May 1974) focused on production of a draft syllabus and had two parts. The first consisted of a revision of the Future Student Outcomes to make them more comprehensive and parallel in form. The second required writing a sample modular unit on a topic similar to those which eventually may be required.

The third two-week staff training workshop (9 - 20 September 1974) was conducted by Dr. D. J. Klaus of the Washington Office of AIR. Dr. Klaus (Ph.D., Experimental Psychology, University of Pittsburgh, 1958) has made major contributions to domestic and international research efforts in educational assessment, curriculum development, instructional systems, peer tutoring, and program evaluation. He attended the original planning conference for the current project, during which he made substantive contributions to development of an overall work plan. In 1969 Dr. Klaus prepared a comprehensive history and analysis of international instructional innovation and individualization, published by USAID as a book for use in developing countries.

In addition to conducting the workshop, which focused on instructional strategies, Dr. Klaus also consulted with the Curriculum Advisor and the PCU Director on overall direction and planning for the project. As explained by Dr. Klaus in his report (Appendix G), his workshop was designed "...to acquaint the participants with alternative instructional strategies that could be applied to the development of modularized curriculum materials, and to provide practice using these strategies to design instructional units suitable for classroom use. The content area chosen for workshop activities was oral and expressive siSwati, although the full range of instructional content in the primary grades was considered during discussions and demonstrations and in homework assignments." At the conclusion of the workshop all participants had acquired experience and skills in evaluating curriculum materials, adapting and improving such existing materials, and selecting instructional strategies to suit various primary level educational objectives.

The fourth workshop was conducted by Dr. W. E. Hathaway (Ph. D., Educational Psychology, University of Pennsylvania, 1971), Evaluator and Research Specialist from the Portland, Oregon Public School System and consultant to AIR. Dr. Hathaway's training and experience includes psychometrics and evaluation, design and analysis, human learning, cognition, child development, systems analysis and operations research, and computer science and information systems. He has participated in projects ranging from development of a test methodology for goal-based learning and development to research into the structure of the intellect and resulting implications for curriculum development.

Dr. Hathaway's workshop (13 - 27 January 1975) focused on methods and conventions for preparing instructional objectives, teaching and testing strategies in cognitive, affective, and psychomotor domains, and instructional objectives and evaluation devices for the first term of Grade One. Criteria (conventions) were drafted and adopted for the development of outcomes, instructional objectives, and evaluation devices for future use of the PCU.

The fifth workshop (10 - 21 February 1975) was conducted by Dr. V. N. Campbell of the Palo Alto Office of AIR. Dr. Campbell (Ph.D., Social Psychology, University of Colorado, 1960) has achieved national impact, in the area of affective education, through his work for the National Assessment of Educational Progress. For this work he has focused on citizenship by defining it in educational terms and then developing a variety of novel measures to assess its achievement. He has conducted research into practical methods for establishing educational priorities. In 1972, he developed a "Value-Contribution" method of setting such priorities as part of a UNESCO-funded project to assist Indonesia in systematic planning for educational improvement.

In his workshop Dr. Campbell addressed methods for preparing affective objectives, evaluation devices, teaching strategies, and related areas. Additionally, as stated in his report, "...although the main focus of the workshop was education for affective development, considerable time was spent on the tasks and procedures that would be useful in the total primary curriculum development." After a review of progress and discussion of specific issues, a workable plan was developed to complete modules of instruction for Grade One in time for introduction into pilot schools in early 1976. The plan included task analysis, scope and sequence organization, and module design.

Dr. Campbell's impact was far wider than the staff of the PCU as the workshop served to focus considerable public attention on character and moral education in the schools. He presented a public lecture on this topic at William Pitcher College. It was attended by 60 members of the faculty and student body. He also gave a seminar to senior inspectors and met with officials of the Ministry of Education.

The sixth and final workshop (10 - 21 March 1975) was presented by Dr. C. O. Agbenyega, Deputy Director of the Test Development and Research Office (TEDRO) of the West African Examinations Council. Dr. Agbenyega (Ph. D., Educational Curriculum Development, Syracuse University, 1971) has been Head of the Accra Office of TEDRO since he established it in 1967. In this position has has supervised TEDRO's educational and professional testing services throughout Ghana. He has long been interested in improving African education to make it more responsive to the needs of developing nations. His own approach to curriculum development has been illustrated in a recently published series of four books entitled Practical Geography for Elementary Schools.

The sixth workshop's objective was to strengthen staff skills in the design and preparation of instructional strategies for Grade One. Dr. Agbenyega gave very helpful suggestions for adapting curriculum strategies to the rural environment and provided valuable techniques and suggestions for integrating the new curriculum across subjects. Dr. Agbenyega was particularly attractive to Swazi educational leaders and his advice was sought on a variety of educational issues. He presented a seminar for senior inspectors and gave several public lectures. A 30-minute talk was recorded and broadcast on Swazi Radio.

Formal negotiations are underway with the University of Botswana, Lesotho, and Swaziland (UBLS) to give academic credit to PCU staff members who have attended this series of workships. Workshop reports, qualifications of the staff who conducted the courses, and names of participants, have been submitted to the appropriate authorities. The request will be presented to the Board of Education for approval.

In addition to the formal training provided by the workshops, the Curriculum Advisor continuously conducted informal instructional sessions for the PCU staff, allocating approximately one-quarter of his time to this activity. This instruction was devoted to improving skills required for specific work targets as well as general enrichment in curriculum development and evaluation. Much of this training was on an individual basis or in small work groups.

Additional training was made available by members of the RTC staff, who gave a number of lectures to the PCU staff on various aspects of measurement. The PCU has also benefitted from meetings with a variety of visitors from outside the country who were interested in education and curriculum development. Informal discussions between the staff and these visitors often took place. Among the visitors were Mr. A. Tosh (UNESCO/ UNICEF, Nairobi), Mr. G. Tyndale (British Council Regional Representative, Maseru, Lesotho), Mr. J. Cameron (London University), and Mr. W. Dodd (ODA). Mr. S. Vivian (Lecturer, Institute of Education, University of Leeds, Overseas Educational Study Group) gave a half-day lecture to the staff on the function of the Teaching Center in Great Britain's school system.

From 16 - 30 May 1975 the PCU Director (Mr. L. B. Lukhele) and the Design and Preparation Specialist (Mr. A. E. F . Simelane) made a short tour of curriculum centers in Tanzania, Kenya, and Zambia. USAID provided funds for Mr. Lukhele's travel and UNICEF funded Mr. Simelane's. Among the places visited were the Tanzania Institute of Education, the Kenya Institute of Education and the Curriculum Development Centre in Zambia. The tour was of considerable value in informing PCU members about curriculum development work in other parts of Africa.

3.8 TARGET 8. ESTABLISH A CURRICULUM DEVELOPMENT LIBRARY

Curriculum development cannot take place without resourse materials. To make such resource materials available a beginning curriculum library has been established. It presently consists of nearly 500 books, manuals, pamphlets, tests, film strips, and cassette tapes provided by AID funds. In addition, nearly 1,000 books and pamphlets have been obtained from local sources. A catalog of all items has been prepared, and each item in the collection has been furnished with a check-out card to ensure its ready availability for circulation.

3.9 TARGET 9. DEVELOP A FRAMEWORK FOR CURRICULUM REFORM, SPECIFYING NEEDED RESOURCES

A draft framework for primary school curriculum reform was prepared on behalf of the Ministry of Education. The framework, the National Primary School Curriculum Plan, included the following components:

1. A description of the strategies and components of a modern curriculum.
2. Criteria for the new curriculum which provide a model innovative educational program.
3. General background information on Swaziland and its educational system, with special emphasis on primary school.
4. A preliminary list of outcomes desired from primary school, divided into Cognitive, Attitude, Character, and Performance Domains.
5. Specific plans for policy making, materials production and distribution, teacher training, progress reporting and evaluation, and training for staff.
6. An analysis of the personnel and fiscal resources, coordinated with a time-phased plan, required to develop the first cycle of curriculum reform.

The plan was developed after discussions with relevant planners, policy makers, and officers of the Ministries of Education. It is fully coordinated with present schemes and programs, e.g., the In-Service Teacher Training Program at William Pitcher College for upgrading primary school teachers, and the curriculum development activities of the various subject matter curriculum panels. A systems approach is stressed for implementation of the new curriculum model. Figure 1 presents a schematic of the proposed system, which coordinates components of the existing educational infrastructure. (All figures are located at the end of this report).

The National Policy Making Subsystem, shown in the upper box of Figure 1, establishes curriculum objectives and approves new curriculum materials. It will be the first component of the overall system. At the primary school level these functions are accomplished by three groups: the National Education Commission, the Curriculum Coordinating Committee (CCC), and the Primary Curriculum Panel (PCP). For a more detailed description of the committee structure within this system see Appendix A.

The Curriculum Production and Distribution Subsystem is the second component. Functions related to this component will be performed by the

PCU, which will also coordinate all materials production and distribution. Materials will be prepared by establishing a materials production center at William Pitcher College and by using existing and planned Government printing facilities. Distribution will be through four Teaching Innovation and Distribution Centers (TIDCs). See Target 13 for a more complete description of these TIDCs.

The Teacher Training Subsystem is the third component. All current and future teacher training activities will be coordinated to ensure maximum impact. Plans for teacher training are discussed below under Target 13.

The fourth component is the Instruction Subsystem, which involves the actual classroom teaching and learning. This will be implemented by the cadre of primary school teachers. Also, it is planned to investigate the use of teaching volunteers and structured tutoring by older students.

The Progress Reporting Subsystem is the final component. Monitoring the use and effectiveness of the new curriculum materials will be a particularly important component of the system. All student progress will be recorded centrally. Each curriculum module will have an accompanying evaluation instrument for measuring student progress, and it thus will be possible to continually assess student progress as well as the effectiveness of the new curriculum materials. Compilation of national results will be accomplished by using the Swaziland Government computer located at Mbabane, an ICL 2903. This reporting system will dramatically increase the educational information flow and will greatly facilitate timely decisions regarding implementation of the new curriculum.

The new plan details the following 14 major project activities:

1. Establishment of curriculum policy and coordination of curriculum development activities among the various curriculum development groups.
2. Compilation of national primary school curriculum objectives.
3. Establishment of the PCU.
4. Large-scale curriculum materials production.
5. Large-scale audio-visual aids production.
6. Progress reporting.
7. Large-scale materials distribution.
8. Pre-service teacher training.

9. In-service teacher training.
10. Establishment of Teaching Innovation and Distribution Centers.
11. Development of an afternoon school curriculum for over-age children.
12. Construction of the PCU building, Teaching Innovation and Distribution Centers, and a Materials Production Center.
13. Establishment of a curriculum library.
14. First cycle of curriculum development.

To clarify procedures for adopting new curriculum materials a document specifying the necessary steps was prepared at the request of USAID. This document, Approval System for Primary Curriculum Materials (Appendix A), outlines relationships among the various groups involved in the approval system and clarifies steps in the decision making process. This procedure has been formally accepted by the Ministry of Education, but with the understanding that it must be flexible to be responsive to the pragmatic realities of an evolving educational system. Even as outlined in Appendix A, its de facto establishment has not yet been accomplished, as some of the outlined interrelationships have not yet been implemented. There is evidence, however, that this document reflects new cooperative directions being taken by groups which have heretofore functioned relatively autonomously.

As an example of such evolving relationships, all subject panels have cooperated with the PCU, as outlined earlier in this report, on the writing and revision of the Future Student Outcomes. Panels which formerly worked independently have begun to coordinate with the PCU in their deliberations. The English Through Activity program for primary school, for example, has had considerable dialogue with the PCU during the past period.

Cooperation was also shown by a two-and-a-half day workshop, conducted by the Senior Inspector (English) at the PCU and RTC offices. The workshop was attended by the PCU staff, along with selected primary inspectors and RTC staff, and its purpose was to prepare guidelines for the 1975 English paper of the Swaziland Primary Certificate Examination. During this workshop it was agreed to use selected outcomes for upper primary, prepared by the PCU, as the basis of the testing. On another occasion, the Senior Inspector (English) arranged for three specialists in pre-reading skills (two expatriate pre-school teachers and Mr. R. Gibson of the In-Service Program) to speak to the PCU staff.

As a further indication of evolving cooperation, the PCU staff and the primary inspectors are being brought together through meetings arranged by the Senior Inspector (Primary) to coordinate teacher training workshops and to plan other joint activities. Several members of the In-Service Teacher Training Course have frequently met with PCU staff to advise them on curriculum matters. The Primary Curriculum Panel is effectively operating and Ministry officials have clarified roles of the various groups concerned with the approval system. The ultimate success of the project, however, will depend on whether or not this cooperation is consolidated and continues to evolve in a substantial and effective manner.

In addition to developing a framework for primary curriculum reform, the Curriculum Advisor was asked during the project to help with other planning for the Government. He participated during May and June of 1975, for example, on the Education Subcommittee of the National Research Council. The task of the Subcommittee was to design an education research framework for Swaziland. This consisted of a general model for system problem solving, steps in initiating research, a research framework, criteria for research, use of the framework, and general recommendations. (See Snyder, C. W., Jr., Bevan, R., Cook, P. F., & Smith, R. An educational research framework for Swaziland. Report to the Swaziland National Research Council, Mbabane, Swaziland; June 1975). The task of clarifying educational problems was also discussed.

Another example was the task of developing a framework for non-formal education. The Curriculum Advisor spent 3 days with Mr. C. Dawson, Educational Planner in the Ministry of Education, in early July 1975 on the preparation of a proposal to present to the Rural Development Committee, a sub-committee to the nation's cabinet. This framework contained an overall rationale, problems facing non-formal education in Swaziland, guidelines for a non-formal scheme, curriculum development guidelines for non-formal programs. a preliminary statement of selected outcomes for the development of knowledges, skills and attitudes (in numeracy, literacy, agriculture, culture, health, technical education, homemaking, and physical education), an organization plan to involve the local communities, an evaluation rationale and procedures, a time-phased management plan, and preliminary cost estimates. The proposal contained many innovative proposals for the development of Community Learning Centres in Swaziland. The World Bank is funding the construction of seven Community Learning Centres for Swaziland to start its scheme, and CIDA will provide a technical advisor in the near future.

3.10 TARGET 10. PREPARE A NATIONAL PRIMARY SCHOOL CURRICULUM PLAN AND DISTRIBUTE IT IN SUMMARY FORM.

It was originally intended to publish the National Primary School Curriculum Plan and distribute it widely to the officers and teachers of the Ministry of Education for the purposes of informing them about government plans. However, as preliminary versions of the plans were presented to the subject panels at various stages of development, it was apparent that the plan was far too detailed and technical for most teachers to master. There was a tendency for people to reject those parts of the plan which they didn't understand. Oral presentations, accompanied by carefully written explanations, seemed to succeed better than written ones alone. It thus became necessary to prepare a summary of the plan devoid of all jargon and with as little stress as possible on technical aspects. About 60 copies of the complete National Primary School Curriculum Plan were distributed by the PCU to technical assistance donors, government planners, curriculum development committees, and other interested parties.

A summary of the plan was prepared for general distribution and was given wide circulation through publication in the November 1975 issue of the Swaziland Teachers' Journal. This article, A Summary National Primary School Curriculum Plan, is reproduced in Appendix K. It contains a a definition of curriculum, the purposes of the plan, an overview of 11 major results the plan will produce, a summary of its innovative aspects in lay language, a list of current programs coordinated within the plan, and major accomplishments to date.

3.11 TARGET 11. DEVELOP DEMONSTRATION MODULES FOR IMPLEMENTATION IN CLASSROOMS WITH TEACHERS TRAINED IN THEIR USE

It was originally planned to produce a single instructional module as a sample for the PCU and other curriculum developers and as the basis for the involvement of teachers and educators in curriculum reform. The module was also intended as a trial of instructional strategies within the Swaziland educational environment, as a source of information on the ability of teachers to utilize modules, as a test of lesson timing, and as a measure of the capabilities of pupils to learn from the materials.

Six modules were produced instead of the single one originally planned. The first was produced by the PCU staff during the first workshop under the general supervision of Dr. Schubert (Appendix E). Its topic was The Origin and Celebration of Five Swaziland National Holidays. Five others were planned by individual staff members during this first workshop and completed after the workshop was over. Five lessons from each module were field tested in at least two schools (one urban and one rural). The modular topic titles are: Graphs, Sugar Production in Swaziland, Classification, Heat, and Picture-making. These modules have undergone further review and revision since the first workshop. The modules contain built-in student mastery evaluation devices.

Minimum work was done on prototype instructional materials as limited personnel resources had to be allocated to higher priority work targets. At various times during the project, work was done on additional sample instructional modules to provide PCU staff with additional practice in module preparation and experimentation with various theories and methods for materials development. When the management plan for the implementation phase was prepared, however, it was decided that Grade One materials had to be introduced into pilot schools early in 1976 in order to be ready for full-scale use in 1977. To meet this schedule, it was necessary to give highest priority to clarifying the outcomes and instructional objectives for the lower primary Grades and Standards. This was done so that the preliminary lower primary outcomes subsequently could be grouped into levels for each of the first four years of lower primary.

In addition to the above mentioned modules, some time was devoted to prototype materials development during and after Dr. Klaus' workshop (Appendix G). The PCU staff began development of several trial lessons in oral and expressive siSwati for Standard XI classes. Lessons included materials on vocabulary development, sentence composition, and spoken siSwati. Post-workshop activities were directed toward introducing some trial materials during 1975 into some schools, as siSwati instruction will be a major area of emphasis within the new curriculum. Work on these lessons had to be interrupted, however, to maintain a timely development schedule for Grade One materials. The PCU staff has begun full-scale development of modules for the remaining Grades as scope and sequence tasks have been completed.

A workshop was conducted by PCU staff during the school holiday, 23 August - 15 September 1975, with 28 Grade One teachers, school inspectors, and instructors of TTCs in attendance. Workshop participants helped write prototype Grade One materials. This will ensure that materials are suitable for teachers and children and will serve as training for those teachers involved in the writing. These modules will be edited by the PCU Design and Preparation Specialists, with help from the technical advisors, and be ready for tryout in January 1976.

3.12 TARGET 12. DEVELOP EVALUATION AND DATA RECORDING PROCEDURES

Evaluation will be a major component of the implementation project. It will be critical to assess how well the present curriculum is meeting the proposed Future Student Outcomes, and to provide curriculum developers with precise feedback on the teaching efficiency of trial instructional materials. As explained above, the PCU staff has consulted with local and advisory staff of the Swaziland RTC with respect to evaluation. Staff of the RTC have been preparing instruments to evaluate student achievement at the Standard II level (fourth instructional year), and PCU staff are designing and preparing parallel instruments for the end of Grade One (first instructional year).

These instruments are based upon the new Future Student Outcomes. They will be administered to a representative sample of schools to determine how well the present instructional system is meeting goals of the proposed new curriculum. Results from this dual-level evaluation will be invaluable for the design and preparation of the new materials, and will be submitted to the Ministry of Education as part of the justification of any curriculum changes recommended by the PCU. They will also provide a data base, representing student accomplishments under the present curriculum, against which to compare the results of future evaluations after the new curriculum has been implemented.

As the modules for Grade One are tried out they will provide opportunities for the PCU staff to experiment with various curriculum development theories and methods. The PCU will conduct classroom tests of instructional strategies, student activities, lesson plans, and related teacher materials. Throughout the field tests the professional staff will gather data useful in the preparation of curriculum materials.

Procedures were developed for systematic field testing. For example, an Observer's Report on Demonstration of a Modular Lesson form and a School Visitation Report form were constructed. Procedures still need to be developed for the following activities: production of modules; effectiveness of modules in reaching instructional objectives and degree of achievement in meeting related outcomes; effectiveness of modules in teacher training; usefulness of various instructional strategies; and feasibility of formal and informal evaluation instruments, including diagnostic devises.

3.13 TARGET 13. PLAN ORIENTATION OR IN-SERVICE TRAINING PROGRAMS FOR TEACHERS TO INTRODUCE THE NEW CURRICULUM

Specific teacher training plans have been incorporated in the National Primary School Curriculum Plan. Teacher training is a major component of the national primary education system.

Pre-service. Coordination between introduction of new curriculum materials and pre-service teacher training will be an important role for the PCU staff. One function of the UBLS School of Education and the teacher training colleges will be to prepare teachers to use the new curriculum materials. As the PCU eventually will be located on the campus of William Pitcher College near the UBLS School of Education and the Nazarene College, considerable interaction is likely to occur between the three staff groups. PCU staff members will demonstrate new materials to pre-service students and supervise practice in their use. They will also assist instructors at the teacher training colleges in teaching the pre-service students to develop practice instructional modules.

In-service. As the new materials are developed, they will be introduced into all in-service and pre-service courses at the teacher training colleges. Introducing new curriculum materials into the classrooms, however, may be more difficult. These teachers must be convinced of the value of the new materials as well as be trained in their use. Teachers will be involved early in curriculum planning and will help to pretest materials in pilot schools to maximize their involvement and identification with the new materials. These materials will require face validity which is immediately apparent, and they will have to be academically superior to the old materials. They also will have to be easy to teach.

Four Teacher Innovation and Distribution Centers (TIDCs) are planned, one in each educational district, and with each administered by a District Education Officer. Teachers will come to these Centers during school vacations and on weekends to examine the new materials distributed to them. The TIDCs will have special teacher training equipment and will be the operational base for primary inspectors and teacher leaders who will routinely make visits to the schools. Several other current projects have shown interest in also using these Centers, e.g., the UBLS Department of Extra Mural Affairs, the UNESCO sponsored in-service teacher training course, and the UBLS School of Education. The Manzini TIDC will be integrated into the new PCU building at William Pitcher. A TIDC site has been selected in Nhlangano and tentative sites have been selected in Piggs Peak and Siteki. Building plans are now being completed by the Government architect and construction of all centers should be completed by December 1976.

In the teacher training system the Headmaster will have a major role as a curriculum leader. It is planned that all new curriculum materials will first be introduced to the Headmaster. He will then help introduce these materials to his teachers and will provide the administrative follow-up to assure that the materials are actually used.

These plans emphasize the use of the existing educational infrastructure. The strategy will be to establish each teacher and officer in his legitimate role and to upgrade him where necessary. This will maximize involvement of educators and minimize alienation of all change agents essential for development and implementation of the new system.

Teacher training activities, both in-service and pre-service, are beginning simultaneously with the actual curriculum materials development. Coordination meetings have begun with the staffs of the two teacher training colleges. Selected members of the TTC staffs have been appointed by the principals of the TTCs, at the request of the PCU, to sit on the PCU review committee. This committee reviews new materials before they go to the subject panels for further review. The staff of William Pitcher In-Service Teacher Training Program has been, and will continue to be, involved in the PCU review committee.

A number of events and activities over the contract period have publicized the work of the PCU within the local and international educational communities and thus indirectly will assist the planned introduction of teacher training programs. For example, the Ministry of Education approved the production and distribution of a quarterly PCU Newsletter which is described under Target 14.

The advisors and staff of the PCU have written a number of papers and articles which have focused the attention of teachers on curriculum reform in Swaziland. These are summarized in Table 3.

From 23 June - 2 July 1975 a highly successful international seminar on Curriculum Development for Basic Primary Education was organized jointly by the Government of Swaziland and UNICEF and held in Swaziland. Participants were from Ethopia, Tanzania, Botswana, Lesotho, and Swaziland.

To quote from the program "This seminar/workshop is convened as a follow up of the UNESCO/UNICEF Seminar on basic education held in Nairobi in 1974 and is designed for participants who are actively engaged in the day-to-day design of curricula in basic education for school and out-of-school learning situations."

"Swaziland's Primary Curriculum Unit is engaged upon the task of specifying a curriculum. An inter-ministerial co-ordination committee has embarked upon the task of curriculum design for basic education in community centers. It is considered by the Swaziland Government and by UNESCO/UNICEF that the work in both these areas is highly relevant to the development of basic education in Africa and that a great deal might be gained by an exchange of views and experiences - and more particularly an opportunity to work together specific tasks in curriculum design."

The theme address of the conference was delivered by Mr. A. Tosh (UNESCO/UNICEF Regional Advisor). It was published in the November 1975 issue of The Swaziland Teachers' Journal and is reproduced in Appendix L.

The seminar program was developed by the PCU staff and approved by a steering committee. PCU staff members participated fully in the workshop. They delivered concept papers and conducted a PCU workshop for three days of the Seminar. In addition they prepared, in cooperation with the In-Service program, a bound copy of background papers for all participants.

Seminar papers and discussion focused on the following problem topics:

1. Who should be involved in Curriculum development for basic education and how should they be involved?
2. How can we prepare all concerned groups for educational (particularly curriculum) change?

3. How can curriculum development best address the non-cognitive aims of education in basic education, e.g., character development, motivation, and good attitudes?

For one activity the workshop participants were divided into three groups, each assigned to consider one problem topic. During the seminar each group met to discuss its topic and then prepared a report of its conclusions. The Ministry of Education will publish a report of the Seminar containing the list of participants, the program, concept papers, country reports, and working group reports.

Many teachers, inspectors, TTC lecturers, representatives from UBLS, and other interested persons attended the proceeding, and reports of deliberations were carried by Radio Swaziland on an almost daily basis. International visitors gave strong support to the curriculum work underway in Swaziland, particularly that done by the PCU, and Swaziland emerged as an important leader in curriculum reform in the region.

3.14 TARGET 14. PRODUCE AND DISTRIBUTE A PCU NEWSLETTER TO PRIMARY TEACHERS

The Ministry of Education approved the production and distribution of a quarterly PCU newsletter. The first issue was distributed in August of 1974 and the second in February of 1975. The third newsletter is now being prepared for distribution in the near future. Miss. M. Makhuba has been appointed editor. One purpose of the newsletter is to acquaint teachers with curriculum plans and progress. Hence, articles to date have described the PCU and its activities, and have given reasons for curriculum reform. A brief teaching improvement suggestion, with matching cartoon, has been introduced with each issue under the siSwati name Umsumpe ("a wise old man who knows almost everything"). The first Umsumpe series deals with characteristics of effective student practice.

3.15 TARGET 15. PREPARE PROJECT REQUEST FOR EXTERNAL ASSISTANCE

The National Primary School Curriculum Plan was submitted by the Swaziland Government to the World Bank in January 1974 and to USAID in May 1974. Both USAID and the World Bank were requested to assist in implementing the proposed curriculum reform. The request to USAID was primarily for components related to technical assistance, commodities, and training. To discuss this request for assistance, USAID invited the Minister of Education (Mr. P. Dlamini), the Permanent Secretary (Mr. E. V. Dlamini), and the Curriculum Advisor (Dr. P. F. Cook) to Washington from 29 July to 3 August 1974. In October a three-man team from the USAID Offices in Washington visited Swaziland to prepare a PROP for the proposed project. Members of this team were Dr. W. A. Whitten and Mr. R. V. Shoemaker of USAID, and Mr. R. B. MacMakin, Publications Specialist from the USAID/TCCU curriculum project at Kabul, Afghanistan. During this visit the Curriculum Advisor consulted with the USAID team in preparing portions of the PROP. Subsequent negotiations with USAID lead to the signing of a Project Agreement in January 1975.

World Bank support for this project has been coordinated fully with the request made to USAID. The World Bank has entered into a broad program of educational development with the Government of Swaziland. Under terms of this agreement, capital expenditures for the primary curriculum development program will be for buildings, furniture, and vehicles, both for the PCU and for the three Teaching Innovation and Distribution Centers. Within the PCU building, to be located at William Pitcher College, will be a teaching materials production facility. There will also be three vehicles for the PCU, one for the production center, and one for each of the three TIDCs.

3.16 TARGET 16. LIAISE WITH DONORS FOR FUNDING OF THE FOLLOW-ON PROJECT

As a follow-up to the proposal development and activities described under Target 15, the Advisor continued to liaise with donors. For example, furniture lists were prepared for the World Bank assistance, and many consultation meetings have taken place on architectural plans for buildings and final site selection for the Teaching Innovation and Distribution Centers.

CHAPTER 4

CLOSING COMMENTS

This project was undertaken as the culmination of several planning efforts by USAID, designed to support educational projects in the UBLS countries. Visiting USAID planning teams had difficulty designing educational projects which were sufficiently responsive to local conditions to be acceptable to the cooperating countries. While the USAID teams emphasized detailed planning, the cooperating countries were rather more eager to "get on with the job."

This project incorporated a different approach to planning. It put a resident educational planner into the country with instructions, among other things, to help local educators develop a curriculum plan with sufficient innovative aspects to attract continued donor support but at the same time be completely responsive to the desires of the cooperating country. His role was to be as non-directive as possible with regard to the actual formulation of the plan.

In retrospect this approach seemed to work well in Swaziland even though the task was not particularly easy. The educational problems facing Swaziland were complex. Careful explanation and sensitivity were required to clarify thinking and arrive at indigenous solutions. Previous assistance projects in Swaziland, from a variety of donors, focused more on doing things for Swaziland rather than focusing on developing local expertise. Considerable explanation was required to get local educators to regard the Advisor in a coordinating role. It was often expected that he would produce things which would simply be approved. At the same time the pressures for immediate products tended to press the Advisor into the role of doing things and in the end some compromises were required.

USAID, as well as other development agencies, should be more sensitive to local conditions in their planning efforts. Cultural nuances are subtle and different, and the current political problems of Southern Africa can militate against trusting relationships with foreigners. In addition, educational solutions are emerging more and more from African problem solvers. Africa is looking more and more inwards for solutions to its problems, but there is still a place for technical advice given in the right way, and a fruitful avenue for USAID would be to develop and define the kind of helping relationship required for professionals of one country to offer professionals of another country technical assistance so that maximum dignity is maintained on both sides.

The training approach undertaken in this project also seems to be a step in the right direction. While there is no question that formal training (higher degrees) improves the capability of local educators, the strategy of bringing the instructors to Swaziland for short workshops rather than sending staff to foreign universities has had clear benefits. First, the instructor adapted his teaching to the culture of Swaziland. The participants did not have to learn in a foreign environment. Second, a high-powered specialist in the country serves to focus attention of large portions of the educational community on a special area (e.g., the affective domain, importance of clear objectives, need to orient the curriculum toward the environment). The PCU workshops initiated considerable debate and discussion. Such activities can constitute a potent influence in bringing about educational change. It appears that a mixture of the two kinds of educational training (i.e., formal degree work leading to certificates and in-country workshops) is a good approach. Many African educators are far more interested in what is going on in other African countries than they are in the West. For example, Dr. C. O. Agbenyega had doors open to him during his visit that were closed to the other workshop advisors. This is probably a sign that solutions to African problems are emerging in Africa and it would seem advisable to support degree course training at appropriate African universities as part of a continuing training strategy. Likewise, opportunities of members of the PCU staff to visit other countries' projects has done much to enhance their self-confidence.

One of the more important aspects of the project was the subjective feeling of personal growth and confidence it produced in the PCU staff members and the team spirit it engendered. They feel that they are very important to educational improvement in Swaziland, that they can master the problems besetting them, and that they have strategies for doing so. They are confident that they are leading in the region, if not the continent.

Table 1. PCU Staff at End of Project

Position	Highest Academic Training
Director	
Mr. L. B. Lukhele	Dip. Ed. Studies
Design & Preparation Specialists	
Mr. A. M. Dlamini	Dip. Sch. Adm.
Mr. S. G. M. Dlamini	J. C.
Mr. G. M. Mabila	Dip. Ed.
Mr. R. M. Magagula	Matric
Miss M. Makhubu	B. A.
Mr. S. D. Maziya	B. A.
Mrs. M. M. Mokogokong	B. Sc.
Mr. A. E. Simelane	J. C.
Administrative Staff	
Mrs. S. Z. Cindzi (Typist)	
Miss M. J. Dlamini (Typist)	
Miss. C. N. Nbuyazwe (Typist)	
Mr. O. Nxumalo (Driver)	
Mr. I. J. Hlatshwayo (Messenger)	
Peace Corps Assistant	
Miss D. Ahles	

Table 2. On-Site Training Workshops

Workshops	Leaders	Topics	Dates
1	Drs. J.G. Schubert and P.F. Cook	Developing Objectives, Constructing Evaluation Devices, Preparing Instructional Strategies, Planning Teacher Training, Implementing New Materials	18 Feb - 1 Mar 1974
2	Drs. J.G. Schubert and P.F. Cook	Preparing Future Student Outcomes, Designing Integrated Modules	22 Apr - 6 May 1974
3	Drs. D.J. Klaus and P.F. Cook	Alternative Instructional Strategies, Assessing Existing Curricular Material, Development of Model Materials in Oral and Expressive siSwati	9 Sep - 20 Sep 1974
4	Drs. W.E. Hathaway and P.F. Cook	Production of Outcomes, Instructional Objectives, and Evaluation Devices for Grade 1	13 Jan - 27 Jan 1975
5	Drs. V.N. Campbell and P.F. Cook	Developing Curriculum Materials in the Affective Domain, Task Analysis, Scope and Sequence, Organizing Grade One Modules	10 Feb - 21 Feb 1975
6.	Drs. C.O. Agbenyega and P.F. Cook	Teaching Strategies for Grade One, Orienting the Curriculum Toward the Environment, Building in a "Survival Kit," Integration of Subjects	10 Mar - 21 Mar 1975

Table 3. Summary of Papers and Articles Prepared And Presented by PCU Staff and Advisors

Articles

Cook, P. F. Curriculum development (Paul Cook answers questions put to him by the editor). Swaziland Teacher's Journal. Feb. 1974, 66, 12-16.

Cook, P. F. Guidelines for curriculum development in primary schools. Swaziland Teacher's Journal. Feb. 1974, 66, 26-29.

Lukhele, L. B. The approach to primary curriculum development in Swaziland. Swaziland Teacher's Journal. Nov. 1974, 67, 8-9.

Lukhele, L. B. What is the primary curriculum unit? PCU Newsletter, Aug. 1974, 1(1), 1-5.

Magagula, M. R. Purpose of curriculum reform in Swaziland. PCU Newsletter, Aug. 1974, 2(1), 1-4.

Papers

Agbenyega, C. O. Education and development (the conquest of the environment through education). Presented to faculty and students of William Pitcher Teacher Training College, Manzini, Swaziland, March 1975.

Cook, P. F. Examination techniques, desirable spread and distribution of marks, the methodology of examinations and various types of examinations. Commonwealth Fund for Technical Cooperation, Regional Testing Centre and University of Botswana, Lesotho and Swaziland School Exams Council Seminar on Examinations, Gaborone, Botswana, Oct. 1974.

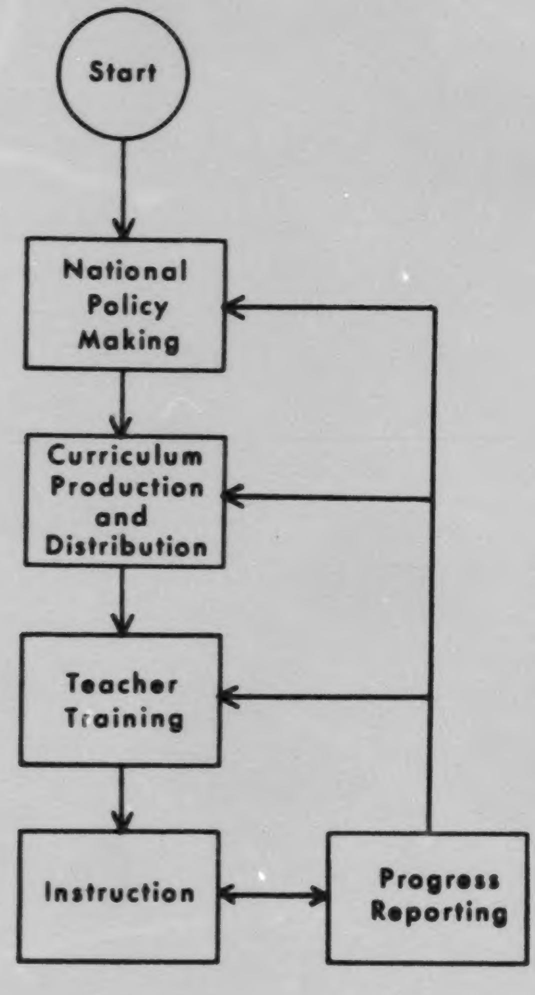
Cook, P. F. Applying the systems approach to goal-oriented curriculum development. Government of Swaziland and UNICEF seminar on Curriculum Development for Basic Primary Education, Ezulwini, Swaziland, June 1975.

Lukhele, L. B. Orienting the curriculum towards the rural environment. Government of Swaziland and UNICEF Seminar on Curriculum Development for Basic Primary Education, Ezulwini, Swaziland, June 1975.

Mabila, G. M. Strategies for teaching attitudes and good character. Government of Swaziland and UNICEF Seminar on Curriculum Development for Basic Primary Education, Ezulwini, Swaziland, June 1975.

Snyder, C. W., Jr., Bevan, R., Cook, P. F., and Smith, R. An educational research framework for Swaziland. Report to the Swaziland National Research Council, Mbabane, Swaziland, June 1975.

Figure 1. National Curriculum Development Subsystem Interrelationships



APPENDIX A

Approval System for Primary Curriculum Materials

Introduction

Each module (or unit) of the new curriculum material will require formal approval by appropriate Ministry of Education (MOE) bodies at several steps. However, due to the complex nature of the curriculum development process, the many groups involved, the need for careful planning and management of many coordinated activities, the approval system must be clear, formal, and definitive. Curriculum developers must know when they have approval on any one proposal and when they have Government backing to proceed to the next step. Also, in view of the sensitive nature of the curriculum development process, it is desirable that representatives of parents, teachers, educators, industry, and Ministries concerned with manpower development be involved in the approval process.

There are two levels of approval which need to be distinguished--policy and professional. Policy is defined as those general guidelines established by Government to implement curriculum reform. It is distinguished from professional and technical matters by its general nature and its political wisdom. Professional and technical matters are those dealing with the art or science of curriculum development wherein special techniques and skills are required. This constitutes, for example, knowledge of instructional theory, subject knowledge, understanding of child development, knowledge of how to publish materials, etc. Curriculum development must occur as a result of an interaction between policy and professional matters. Either may be a constraint on the other, and dialogue between the two must be achieved. Professional techniques must be consistent with policy, and policy must be technically and professionally possible.

Few policy bodies other than the PCU, Subject Panels, the Primary Curriculum Panel, and perhaps one or two others will be involved with approval at the professional level because of the vast amount of coordination and detail required (e.g., the selection of hundreds of teaching strategies for instructional objectives, the voluminous number of decisions about the kind and type of content for each strategy, decisions about the kind and type of content for each strategy, decisions about formats of hundreds of lessons, etc.). Although policy-makers will consider these in broad terms, they will not be able to examine all details of the professional development process.

Composition and Role of Various Bodies in the Primary School Approval System

The composition and roles of the following bodies in the approval system are outlined below. Figure A-1, at the end of this Appendix, shows the relationships between the various concerned bodies.

1. Ministry of Education (MOE). This body, for purposes of the

primary school curriculum, consists of the executive officers of the headquarters staff, i.e., the Minister of Education, Permanent Secretary, Chief Education Officer, and Senior Inspector (Primary). These officers, together with representatives from Economic Planning, form a committee called the "Way Ahead Committee." This committee shall approve curriculum for the primary schools and shall direct the PCU in its work priorities. It shall also decide upon curriculum issues. It shall also be responsible to coordinate with other ministries on primary curriculum matters and inform and involve the public as it deems fit. It shall meet on an as needed basis.

2. Primary Curriculum Panel (PCP). This body is established to advise the MOE on primary curriculum policy, to coordinate activities of the subject panels and other bodies involved in the development of the primary curriculum, and to inform and involve the total educational community in the primary curriculum development process.

It shall also coordinate with the Curriculum Coordinating Committee (CCC) to ensure sufficient coordination between primary and secondary curriculum development. It is chaired by the Senior Inspector (Primary). The PCU Director acts, ex officio, as executive secretary to the panel. Members are representatives from the subject panels, the UBLS School of Education, the Regional Testing Centre, William Pitcher College, Nazarene College, William Pitcher In-Service Courses, Swaziland Teacher's Associations, Educational Broadcasting Services, one from each District Education Office, and two from the community. The panel meets quarterly with provision for special sessions. This Committee shall recommend for approval all curriculum materials for the primary schools without the recommendation, unless otherwise directed by the Way Ahead Committee, of the MOE. Hence, all matters concerned with in-service courses, syllabus revision, materials, etc., shall be dealt with through the PCP.

3. Primary Curriculum Unit (PCU). The PCU shall be established within the Ministry of Education and is part of the Ministry's executive branch rather than an advisory body. As such, it shall execute government policy by providing technical and professional skills required to carry out the policy, and it shall have the necessary authority to carry out its work.

The PCU shall also, by using professional techniques at its disposal, diagnose education problems related to its work, and propose solutions to the Ministry through the Senior Inspector (Primary).

While many of the subject panels previously have been executing policy by developing curriculum materials and conducting courses, the SI(P) shall assume centralized responsibility for executing all curriculum programs in the primary schools to ensure that there are no duplication of efforts, conflicting programs, or wasting of resources. The SI(P) shall utilize the PCU and the District Education Officers to execute curriculum policy. Subject panels will continue to advise the Ministry on curriculum development policy through the PCP and will continue to make professional and technical inputs through close coordination with the PCU and through consultation with the SI(P). Members of curriculum panels will meet regularly with the PCU staff and sit on the PCU's internal approval committee as detailed below. Selected members of the subject panels shall prepare selected curriculum materials as jointly agreed to by the PCU and appropriate Senior Inspectors and Subject Panels.

4. Subject Panels (SPs). There are 11 subject panels: Mathematics, English, Science, Agriculture, Geography, Home Economics, Elementary Technology, Zulu/siSwati, History, Commercial Studies, and Religion. They are composed of a Chairman, usually the Senior Inspector in the subject, and representatives of the subject association, the UBLS School of Education, TTCs, the Swaziland Association of Teachers, etc. They advise the MOE in primary curriculum matters through the PCP on matters concerning their subject area. They may recommend policy through the same channel. They represent subject associations and as such shall keep the subject associations fully informed of, and involved in, primary school curriculum matters. They shall coordinate with and advise the PCU on technical and professional matters and shall appoint representatives to sit on the PCU's internal approval committee when materials are being approved in the appropriate subject area.

5. Subject Associations (SAs). Subject associations are composed of teachers who are specialists or who may be interested in a subject area. Subject panels shall keep subject associations fully informed of curriculum development efforts in the primary school and shall be the means by which subject associations may communicate their desires with regard to curriculum reform. It is expected that one source of volunteer curriculum writers will be the subject associations, who have members with special skills and interests in preparing materials for primary schools. These writers will work with the PCU on the preparation of materials.

Other Bodies

All other bodies concerned with primary curriculum development shall be involved in the curriculum development process through representation on the Primary Curriculum Panel, subject panels, or in such other ways that the PCP may recommend, and the MOE approve (e.g., special meetings, the establishment of special committees, public relations campaigns, etc.). Examples of other bodies are inspectors, District Education Officers, Headmasters, teachers, teacher associations, the Regional Testing Centre, School Broadcasting, etc.

Flow of Decision-Making Process

Figure A-2 presents a flow diagram showing the steps in the curriculum approval process. As curriculum material proceeds through development, it will require the following approval steps.

1. Identify Outcomes. Prior to revision of the curriculum and to make certain that changes are suggested according to clearly specified criteria, future Student Outcomes stated in terms of what children will know about, have skill in, or have attitudes about, shall be identified, written, and approved.

2. Evaluation of Changes. Using the new Outcomes as criteria, the present curriculum will be evaluated by tests and other methods to determine required changes in curriculum to meet the new Outcomes. The PCU, working with the Regional Testing Centre, shall carry out this evaluation under the direction of the MOE.

3. Approval of Changes. Based on its evaluation, the PCU shall recommend to the MOE through the Senior Inspector Primary, those changes it deems necessary. The SI(P) shall present these recommendations to the PCP for discussion and recommendation for approval. The MOE shall then consider the changes and approve those it deems necessary and desirable and direct the PCU, through the SI(P), to implement the changes.

4. Design and Materials. The PCU Director shall assign specific work targets to his staff which shall design the curriculum materials and prepare the module specifications (e.g., outcomes to be addressed, all instructional objectives, module length, number of lessons, evaluation devices, approach to teaching strategy, etc.). This will ensure that a proper curriculum structure is maintained, modules integrated as planned, and appropriate learning and sequencing principles addressed.

5. Design Approval. The PCU Review Committee, consisting of PCU professional staff, technical advisors, and representatives from appropriate subject panels, shall review and approve the design.

6. Prepare Materials. When the design specifications for a module have been completed and approved by the PCU Review Committee, writers will be assigned to prepare the module. Sources and the training of writers are discussed elsewhere. When materials have been prepared in draft, they shall be edited by the professional staff of the PCU to ensure they meet the design specifications, are written to a desirable professional standard, and have a uniform format.

7. Approval of Materials. After editing, the draft module shall be presented to the PCU Review Committee for approval prior to being pretested in a pilot school.

8. Trial Test in Schools. When materials have been approved by the PCU Review Committee, they shall be assembled, together with other modules, and tried out in pilot schools (8 to 10 schools carefully selected to be representative of the various educational conditions present in the country). Materials shall be evaluated both by formal testing and by the reaction of teachers, headmasters, parents, inspectors, etc., and will be revised as needed.

9. Professional Approval. After trial testing and revision, the PCU Review Committee shall give final professional approval of a module to be implemented in the primary schools on a wide level.

10. Government of Swaziland Approval. Upon approval by the PCU Review Committee, materials shall be presented to GOS through Senior Inspector (Primary) along with an evaluation report. The SI(P) shall present the materials to the PCP for discussion and recommendation for approval. The

PCP shall coordinate with the Curriculum Coordinating Committee. After PCP approval, materials shall be presented to the Way Ahead Committee for approval. Once approved, the SI(P) shall notify the PCU that it can proceed with large-scale production, distribution, and teacher training related to the new materials.

Amendments to Approved System

As the curriculum process is in a developing stage, and as changes in the procedures outlined in this document may be required as a result of this, the approved process shall be reviewed from time to time to ensure it is meeting its objectives and is working as efficiently as possible.

Figure A-1. Relationship of Primary Curriculum Approval Bodies

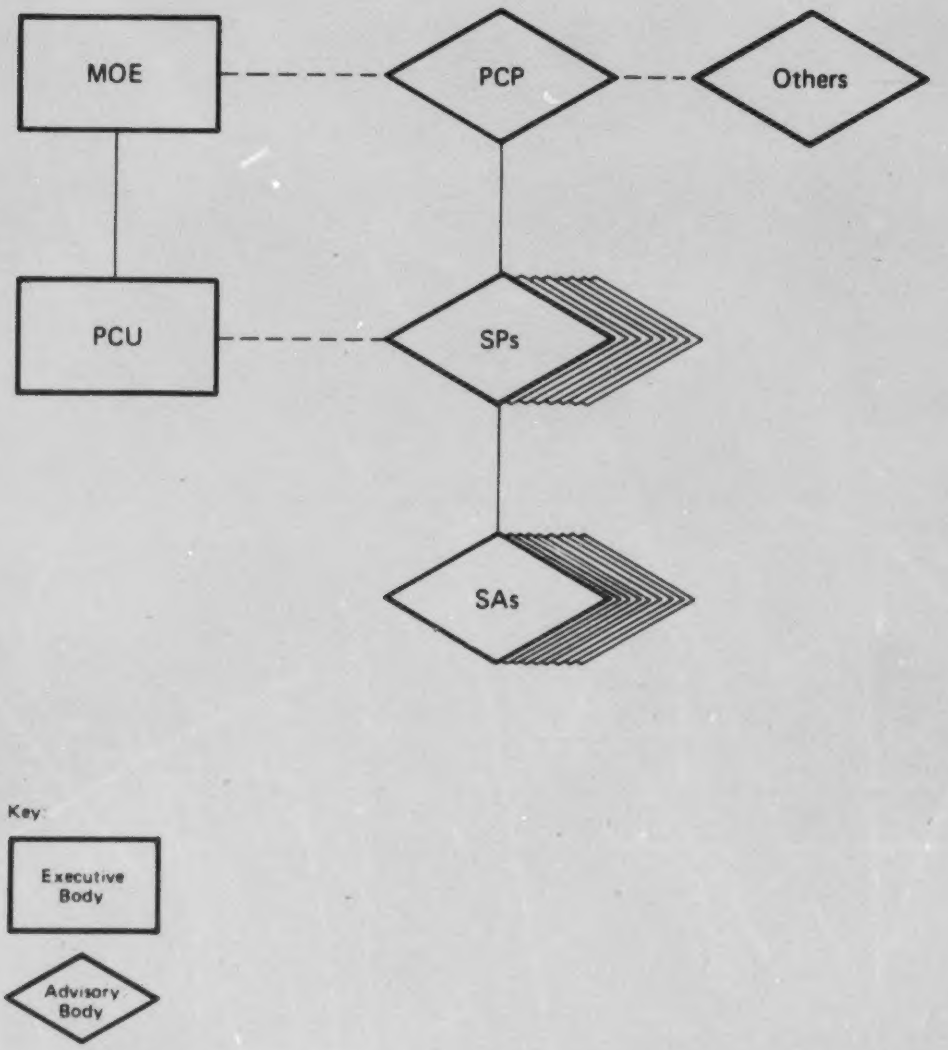
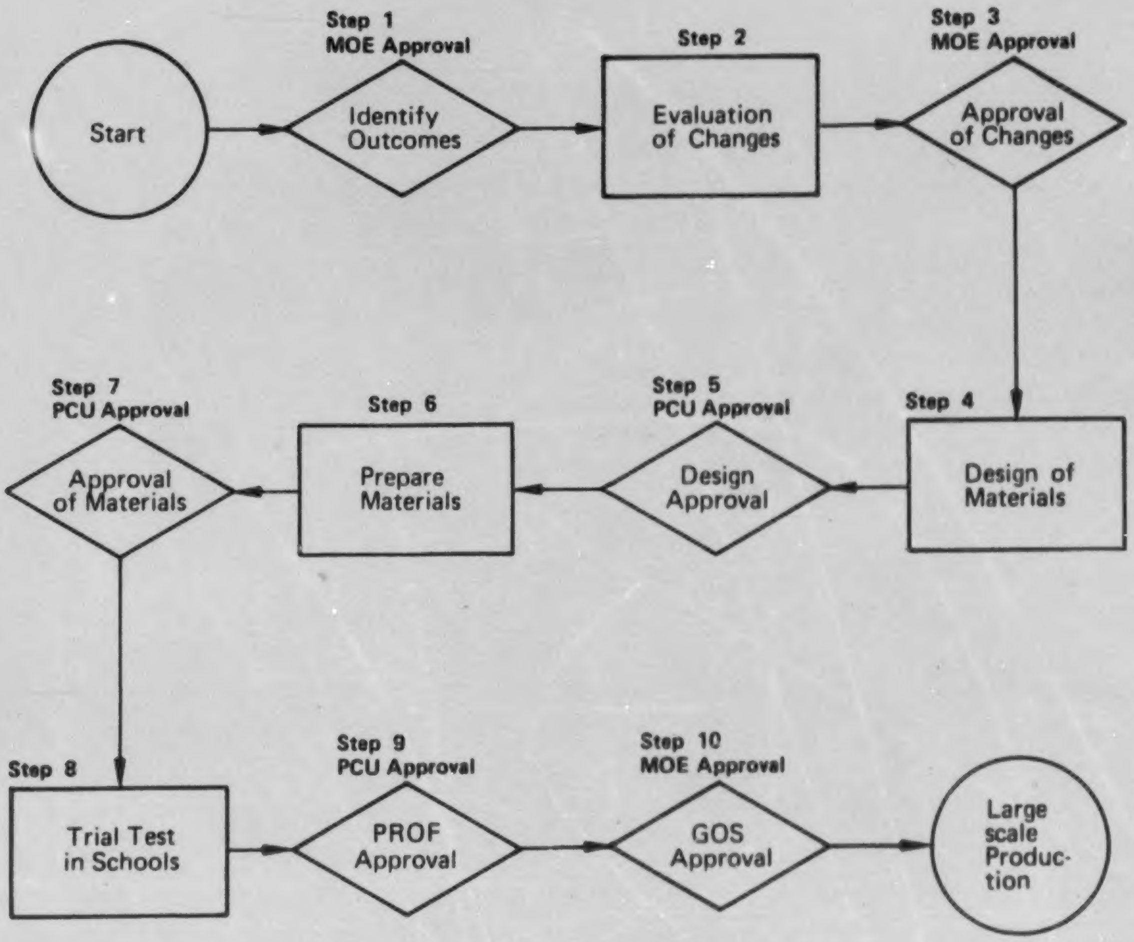


Figure A-2. Approval Steps



APPENDIX B

National Goals for Primary School

Circular CCC-9/1975

TO: Policy-Makers in the Government of Swaziland, especially the Ministry of Education.

FROM: The Curriculum Co-ordinating Committee, the Advisory Body to the Chief Education Officer.

A. Approval:

This document was approved by the Curriculum Co-ordinating Committee at the Ninth Meeting held on the 7th March, 1975 at the Ministry of Education Conference Room.

B. The Primary Course:

The basic aims of the primary school course are to give a child:

(i) a broad educational background, which is intended mainly at helping the child develop positive attitudes towards the acquisition of knowledge.

(ii) the basic skills of literacy and numeracy.

In more detailed form the aims are as follows:

1. To provide the child with educational experience, with the ability to think about what he is doing and why he is doing it; about the significance of the method he is using.
   Examples: Child -
   a. Desires to ask questions about the environment and expects to find some answers through ones own activities; e.g. reads and studies books on science, leads others in a fact-finding project, explains experimental findings to others, etc.
   b. Understands the basic ideas of problem solving, e.g. isolates problems, gathers information, makes hypothetical solutions, tests hypotheses, etc.
   c. Attempts to keep informed through reading, listening and discussing e.g. reads newspapers and magazines, listens to radio announcements, reads Government notices, etc.
2. To enable the child to communicate effectively in siSwati and English, the two official languages of Swaziland.

Examples: Child -

a. Demonstrates skills in listening and speaking, e.g. converses about a subject studied in school, expresses personal ideas, reports details of an accident, listens to radio programmes, etc.

b. Demonstrates oral and silent reading skills, e.g. reads orally with expression, reads instruction, etc.

c. Demonstrates increased skills in writing, e.g. writes reports, completes business forms, writes letters, etc.

3. To enable the child to acquire a basic knowledge of Mathematics, general and applied Science, Health and Sanitation, and Arts.
Examples: Child -

a. Performs operations with integers and fractions, e.g. solves mathematical sentences, solves open sentences, equations, inequalities, formulas, etc.

b. Understands agriculture, e.g. explains benefits of crop rotation, explains about the crops and vegetables growing in ones own vicinity and the best time when to grow them, etc.

c. Practices and values good health habits and cleanliness, e.g. exercises and washes the body regularly, uses toilets and latrines, eats properly, etc.

4. To develop in the child a rational attitude to nature, his fellow men and social phenomena.
Examples: Child -

a. Knows basic scientific facts about the environment, e.g. understands weather, understands size of scope of the universe, understands the systems of the body, etc.

b. Desires and values looking for cause and effect relationships, e.g. asks questions and gathers information about natural events, keeps notes of experimental findings, attempts scientific explanations of events, etc.

c. Understands the need for rule by law to ensure a stable and peaceful government, e.g. obeys laws, encourages others to obey laws, knows basic laws of nation, etc.

5. To develop his aesthetic taste and appreciation of his cultural heretage through Music, the Art and Literature.
Examples: Child -

a. Understand Swazi culture and tradition, e.g. describes the traditional norms, lists the Swazi celebrations and the places where they are celebrated, states the principles of Swazi family organisation, etc.

b. Can sing and dance, e.g. sings traditional songs, performs traditional dances, plays traditional instruments, etc.

c. Has learned how to express himself through art and craft, e.g. learns to weave mats, prepares sisal fibres, makes sculpture from soapstone and wood, etc.

6. To enable the child to develop self-discipline, a strong moral character and sense of spiritual values.
Examples: Child -

a. Accepts and believes in the principles and teaching of ones own religious beliefs and does not impose on the rights of others, e.g. performs personal acts of charity, does kind things for others, is honest, etc.

b. Desires to practice love for God and ones neighbours, e.g. is courteous and polite to people, helps less fortunate persons, is respectful of their rights, etc.

c. Views oneself as a child of God, e.g. emulates the life of good men, feels self-respect and personal worth, treats others as equals, worthy of self respect, etc.

7. To awake his desire to achieve something and to continue self-improvement through education.
Examples: Child -

a. Can appreciate the value and purpose of education in ones life, e.g. works hard on all subject areas, does additional assignments to acquire new information at school, encourages younger children to go to school, continues to study formally and informally after leaving school, etc.

b. Has developed good study habits, e.g. reviews classwork by doing new assignments and looks for information whenever available, does own studies at home without urging from parents or elders, plans specified time for studying, etc.

c. Has participated in and contributed to some important activity, that proceeds through phases of planning, operation, and evaluation on a predetermined schedule, e.g. shares ideas in a group activity in all tasks demanded by a project, considers alternative solutions and approaches to solve a problem, works with others on a community project, etc.

8. To create in the child a love of work, and appreciation of the dignity of labour, and a readiness to engage in a socially useful activity.
Examples: Child -

a. Has developed the attitude that any task worth doing is worthy of ones best performance, e.g. accepts hard challenges, encourages others to render best performance, finishes tasks assigned at school or home, etc.

b. Has developed work habits of co-operation, of service, of acceptance of a given task, of initiative beyond the minimum required, particularly in tasks that require working with other students or family, e.g. co-operates with those in authority, abides the decision of the majority, readily looks after smaller children, etc.

c. Appreciates the contribution that all productive workers make to national development and respects the dignity of all forms of labour, e.g. knows about many different jobs, praises various workers for the contribution they make to the development of the country, etc.

9. To familiarise the child with the basic theoretical and practical experience of simple processes of production with special reference to Agriculture and selected branches of Industry.
Examples: Child -

a. Understands basic industrial processes, e.g. fabrication, moulding, reads books on industrial processes, etc.

b. Has learned the composition of food, e.g. lists food substances found in a balanced meal, plans a balanced meal, etc.

c. Desires to grow gardens using improved agricultural methods, e.g. voluntarily tills the soil after harvesting, voluntarily follows the soil before planting, etc.

10. To create in the child the spirit of national consciousness and patriotism.
Examples: Child -

a. Desires to engage in patriotic activities, e.g. voluntarily helps authorities carry out a National project, attends National holiday celebrations, etc.

b. Has developed respect and love for ones country, e.g. stands at attention when the raising of the national flag and the singing of the national anthem takes place, volunteers to sing traditional songs, promotes national programmes, etc.

c. Knows the history and geography of ones community and some basic facts about Swaziland, e.g. describes the structure of the Swazi nation, reports on how the Swazi people migrated to Swaziland, explains the Incwala ceremony, etc.

11. To enable the child to learn the good use of leisure.
Examples: Child -

a. Appreciates the importance of physical education in relation to good health, e.g. exercises regularly, attends sports events, participates in sporting activities, etc.

b. Expresses oneself through art and craft, e.g. does painting, sews clothing, weaves cloth and other fibres, etc.

c. Has achieved certain manipulative skills with tools and art materials, e.g., can use hammer and saw, uses paint brushes, uses measuring devices accurately, etc.

APPENDIX C

PRIMARY CURRICULUM UNIT

TERMS OF REFERENCE

The Primary Curriculum Unit (PCU) is established as the result of an agreement entitled: Swaziland Curriculum and Educational Materials Development between the Ministry of Education of the Government of Swaziland and USAID. Quoting from the agreement:

> "The focal point for all curriculum development activities (in the primary schools) will be a newly established curriculum centre or unit to be established within the Ministry of Education. It is recognized by the Ministry that curriculum study, evaluation and revision must be a continuing process if the nation's schools are to remain viable and relevant within a changing economic and social environment. To provide the dynamic leadership needed for the nation's schools, the Ministry of Education is committed to permanently staffing the curriculum centre with people who have good communication skills, who are sensitive to the needs of both students and society, and who have the professional competence to interpret the needs and provide leadership in the development of educational programmes.
>
> Such an operational curriculum unit or centre will have at least four areas of responsibility: (1) the assessment and formulation of relevant educational goals, (2) the design and validation of curriculum materials and syllabi, (3) the development and introduction of new instrumental materials, and (4) the introduction of new curricula into the teacher training programme. Since this unit or centre is being established within an operational educational system, it need not start at the beginning in any area, but may build upon work already underway.
>
> Through this curriculum centre the Government of Swaziland will assume full responsibility for setting policies, approving procedures, accepting materials, and evaluating results. The Ministry of Education recognizes that overall curriculum revision could progress more effectively if a high level curriculum co-ordinating committee were empowered to give direction to curriculum development on behalf of the Government. It is understood that a curriculum co-ordinating committee will be appointed by the Ministry of Education with membership taken from the various local groups interested in primary education including representatives from the Ministry, teacher's groups, headmasters, teacher training colleges and the private sector."

Responsible to

The PCU shall be responsible to the Senior Inspector Primary of the Ministry of Education, Government of Swaziland.

Status

The PCU is established within the Ministry of Education and is considered as part of the Ministry's executive branch rather than an advisory body. As such, it executes government policy by providing those necessary technical and professional skills required to carry out the policy, and it shall have the necessary authority to undertake its work. Also, the PCU shall, by using professional techniques at its disposal, diagnose educational problems related to its work and propose solutions to the Ministry through the Senior Inspector Primary.

Policy Direction

Policy is defined as those general guidelines which shall be established by Government to carry out curriculum reform in the primary school. It is distinguished from professional and technical matters by its general nature and its political wisdom. Professional and technical matters are those dealing with the art or science of curriculum development wherein special techniques and skills are required. for example, knowledge of learning and instructional theory, knowledge of a subject, understanding of child development, knowledge of how to publish materials, etc. Curriculum development must occur as a result of an interaction between policy and professional matters. Either may be a constraint on the other, and dialogue must be achieved prior to the establishment of either. Professional techniques must be consistent with policy and policy must be technically and professionally possible.

The PCU shall work within policy guidelines set down by the Ministry of Education through the Senior Inspector Primary. The PCU is not responsible for establishing curriculum development policy, while it may recommend on policy matters, especially those matters effecting its professional work. Policy on curriculum development in the primary schools is determined by the Minister of Education through the Way Ahead Committee which is advised in primary school curriculum development matters by the Primary Curriculum Panel. The machinery for accomplishing dialogue between the PCU and the Policymakers shall be regular meetings between the Director, PCU, the Senior Curriculum Advisor, SI(P) and DEO. Inspectors, subject panels, DEOs, teacher organizations, TTCs, teachers, private sector, etc., shall make their recommendations for primary school through the Primary Curriculum Panel where all plans will be co-ordinated and recommended for approval.

Work Priorities

The work priorities of the PCU at the policy level shall be determined by the Way Ahead Committee within the context of the educational priorities in the National Development Plan. Work priority planning at the professional level shall be the responsibility of the Director, PCU, but shall be subject to the approval of the Senior Inspector Primary. The Director, PCU, shall be responsible to determine day to day work activities of the staff of the PCU to accomplish work priorities.

Purposes

Within the framework of the agreement cited above and Government policy as shall be set down from time to time, the PCU shall have the following purposes:

1. Curriculum Design and Preparation. To assess and formulate relevant educational aims suitable for curriculum development, to design and develop appropriate instructional methods, to select appropriate content materials, to design teachers' guides, to select and design appropriate student activity materials, to design evaluation devices and to design appropriate visual aids. To make certain that the materials are appropriate to achieve approved aims, materials will be tested in selected pilot schools and revised before they are introduced on a large-scale into the primary school system.

2. Production of Materials. To produce prototype materials for trial testing including teachers' guides, student materials, evaluation devices, visual aids, etc., and to establish and manage a materials production facility for this purpose. Also, to arrange for large-scale production of materials required for the curriculum including teacher materials, group materials required for each teacher, individual student materials, visual aids, national examinations, etc.

3. Distribution of Materials. To store, assemble, schedule and manage the distribution of curriculum materials for primary schools, including to help design a system of money collection and accounting (approved by the Ministry of Education) through the Teaching Innovation and Distribution Centres (TIDCs). It will be the responsibility of the Ministry of Education accounts department to manage the money collection system.

4. Teacher Training. To design and prepare both pre-service and in-service teacher training materials required to train teachers in the appropriate use of new curriculum materials, and to co-ordinate training programmes effectively to coincide with the introduction of new materials in schools. The PCU will not have responsibility for pre-service teacher training, as this is the function of the UBLS School of Education, the Teacher Training Colleges and the Ministry of Education, but the PCU will be responsible for designing a procedure together with UBLS and the TTCs to ensure an appropriate PCU input into the pre-service programme. In-service teacher training will be carried out in 4 TIDCs as well as in future in-service courses taught at the TTCs. Primary administrative responsibility for the TIDCs will rest with the District Education Officer (DEO). Teacher Leaders assigned to the TIDCs will be PCU staff members and will carry out teacher training under the direction of the DEOs but shall have professional and technical assistance from the PCU.

5. Evaluation. To design and manage a progress reporting system to assess curriculum materials and monitor use of the materials by teachers. This will include reporting materials usage and student progress. Reports shall be sent from the teacher to the headmaster who shall, in turn, report to the DEO and the PCU. The PCU will eventually have responsibility for developing and administering the national Standard 5 examination which will be considered a part of the curriculum programme.

6. Staff Training. To plan and direct training of the PCU staff, both professional and non-professional staff. This activity will be carried out within the context of the Project Agreement with USAID or with future donor agreements which include financial assistance for training. PCU will work closely with technical advisors provided by donor agencies and will give full consideration to their advice and recommendations. The Way Ahead Committee shall have final authority over selection of counterparts who may be identified for training in foreign countries or in domestic institutions, but PCU will be consulted in counterpart selection.

7. Co-ordination with Subject Panels. As the PCU is established within the Ministry of Education, subject panels will be advisory to it at the professional level. However, the PCU is to discuss with and seek advice from the subject panels in its work - especially in the design and preparation of new materials to ensure that the primary curriculum is built upon as wide a base of professional support as is possible. It shall not be the task of the PCU to co-ordinate broadly at the policy level which is the responsibility of the Primary Curriculum Panel or other bodies as the Ministry shall determine, but it shall be responsible at the professional level.

Organizational Structure

The PCU organizational structure and staff requirements shall be determined by the Way Ahead Committee, but shall be consistent with agreements made with foreign donors for counterparts and work requirements of the Unit. It shall be the responsibility of the Director, PCU, to keep the Way Ahead Committee fully informed of PCU's needs and requirements through the Senior Inspector Primary and to submit for approval any changes from those currently projected in agreements, or future agreements with donors, to the Way Ahead Committee accompanied by terms of reference for the post. Organizational structure of the PCU may be changed as required to meet work targets. It shall be the responsibility of the Director, PCU to suggest needed structural changes and submit them for approval.

Finance

The Director, PCU, shall be responsible to draw up a yearly budget which shall be presented to the Senior Inspector Primary for approval. The Director, PCU shall have expenditure authority over funds approved for the PCU. The actual payment and account recording shall remain the responsibility of the accounting office in the Ministry of Education. The Director, PCU, shall have authority to deal directly with the accountant in the day to day management of funds. Orders made by the Director, PCU, shall be according to item number of which funds were allocated and expenditure of the vote in each item number shall not be exceeded without approval of the SI(P). Desirable but unforeseen expenditures not included in the budget estimates shall be submitted by the Director, PCU, to the SI(P) to request additional support if funds are available.

Reports

An annual report shall be submitted by the Director, PCU, to the Senior Inspector Primary covering the academic year. This report will contain a summary of work progress for the past year and present plans and proposed schedules of project activities for the coming year. The format will be determined as appropriate by agreement between the Director, PCU and the Senior Inspector Primary.

Conditions of Service

Conditions of Service of the PCU shall be as determined by the Way Ahead Committee and be amended as seen fit from time to time by that body. Due regard will be given to provide conditions of service to encourage career-minded personnel to join and remain with the PCU so as not to detract from the professionalism of the Unit. Due regard shall be given to maintaining a clear career ladder outlining opportunities for advancement. Table 1 gives the scales on which current officers have been appointed. (See Table C-1 on page following).

Amendments to these Terms of Reference

These Terms of Reference may be amended from time to time as deemed necessary. As the PCU is a new organization it is expected that changes in the Terms of Reference may be necessary to accommodate a developing situation.

Table C-1

PCU STAFF: CONDITIONS OF SERVICE

Conditions of Service of the PCU Staff are as outlined below:

A. Since it is not intended that these officers should become civil servants, but that they should remain under U.T.S., it logically follows that U.T.S. conditions of service will continue to apply to these officers.

B. LEAVE: These officers will be entitled to 25 leave days per annum. In fact, every teacher will be entitled to the same number of leave days per annum.

It may be helpful to point out that this Ministry is moving in the direction of giving each teacher 25 leave days - to be taken during vacation. This means that teachers not officially on leave may be called on duty, e.g., to attend courses.

C. SALARIES: The salary scales of these officers will be as follows:

1. Graduates:

   E2700 x 120 - 3420 x 150 - 4020 x 180 - 4560

2. Assistant Lectures with Post-matric qualifications and teaching experience:

   Male: 2376 x 108 - 2434 x 144 - 4212

   Female: 1980 x 90 - 2070 x 120 - 3510

3. Assistant Lecturer with Primary Higher qualifications and experience:

   Male: 1716 x 72 - 2148

   Female: 1430 x 60 - 1790

APPENDIX D

Terms of Reference for PCU Staff

POST: Director, Primary Curriculum Unit

1. Responsible to: Senior Inspector (Primary), Ministry of Education

2. Supervisory Responsibilities: Responsible for all professional administrative matters of the Primary Curriculum Unit (PCU) and management of:

   a. Design and Preparation Officers
   b. Evaluation Officers
   c. Production and Distribution Officers
   d. Pre-Service Teacher Training Officers
   e. In-Service Teacher Training Officers and Teacher Leaders at TIDCs.
   f. Secretary/Typists
   g. Messenger/Driver/Clerk
   h. Cleaning Staff

3. Personal Responsibilities:

a. Be responsible for the execution of policy for all curriculum development activities in the primary schools and to diagnose education problems and to make recommendations to government based on his professional expertise.

b. Determine day-to-day work priorities for the PCU staff within the general work priorities set down by the Ministry through the Senior Inspector Primary.

c. Supervise the accomplishment of the following tasks of the PCU:

(i) preparation of national primary school aims;
(ii) preparation of a new primary school syllabi;
(iii) design and preparation of new curriculum materials required by new syllabi;
(iv) identification of materials production needs for new curriculum materials and supervise the production of needed educational material both for trial materials and large-scale materials;
(v) introduction of new curriculum materials into pre-service and in-service teacher training courses;
(vi) identification, training and commissioning of writers from the teaching cadre to help prepare modules;
(vii) editing of materials produced by outside writers for format and style required for new materials;
(viii) preparation of teacher training materials;
(ix) further training of PCU staff;
(x) planning of appropriate examinations and other evaluation devices for new curriculum materials;

(xi) Liasing with other appropriate institutions, e.g., teacher training colleges, printing firms, UBLS, Regional Testing Centre, Educational Broadcasting Services, etc.

d. Recommending to the Senior Inspector (Primary) on addition or reassignment of PCU personnel.

e. Preparation and administration of yearly budgets for the PCU, making budgetary decisions, and signing papers related to budgetary control and payment of accounts.

f. Functioning as Executive Secretary of the Primary Curriculum Panel.

g. Responsible for making decisions and signing papers on all matters affecting the professional and technical standards of the PCU.

h. Liaison with technical assistance advisors who may be assigned to advise in planning and development of new curriculum materials and their implementation into the primary schools.

4. Substitution: The Senior Design and Preparation Specialist will take charge in his absence.

i: Design and Preparation Specialist

1. Responsible to: Director, Primary Curriculum Unit

2. Supervisory Responsibilities: This officer will not have administrative control over other officers in the PCU unless otherwise directed.

3. Personal Responsibilities: The officer, under direction, shall be responsible for:

a. designing and preparing primary school outcomes and objectives.

b. developing teaching strategies appropriate to meet outcomes and objectives.

c. designing and preparing evaluation devices to measure outcomes and objectives.

d. designing and preparing teachers guides for the curriculum.

e. designing and preparing student materials, visual aids, etc. required for the curriculum.

f. designing and conducting appropriate pilot testing of new materials to evaluate the effectiveness of new materials prior to their introduction into the schools on a large scale.

g. designing and conducting materials-writing workshops for teachers, headmasters, inspectors, etc.

h. editing materials produced by writers from the materials-writing workshops.

i. liaising with subject matter experts and subject panels to ensure that curriculum materials are accurate and that are co-ordinated with other plans and current programmes.

j. advising PCU teacher training staff on appropriate pre-service and in-service teacher training strategies.

k. working closely with technical advisors assigned to the PCU for advisory and training purposes.

POST: Production and Distribution Manager

1. Responsible to: Director, Primary Curriculum Unit

2. Supervisory Responsibilities: This officer will have administrative responsibility for all production matters of the Primary Curriculum Unit and will supervisr printers, proof readers, artists, photographers and clerks working in the production section of the PCU. In addition he shall be responsible for the distribution of materials from the PCU, publishers, printers or other suppliers, to the TIDCs and from there to the primary schools.

3. Personal Responsibilities: This officer, under direction, shall be responsible for:

a. supervising the production of proto-type materials.

b. supervising the production of large-scale materials.

c. liaising with outside publishers and printers whose services may be required in either proto-type or large-scale production of materials.

d. advising the Director, PCU and the design and preparation specialists on the many production constraints that exist, the most efficient and economic methods of production, the time schedule requirements and the resources available within and without the country for producing various types of materials.

e. maintaining printing equipment under his supervision.

f. helping to design a distribution system which provides for complete and timely flow of curriculum materials for schools from the suppliers to the classroom teacher.

g. collecting information required to determine future materials requirements in the primary schools.

h. supervising the assembly of materials from different sources (e.g., PCU production plant, outside publishers and printers, etc.) into modules or other readily deliverable packages.

i. establishing distribution procedures for the Teaching Innovation and Distribution Centres.

j. scheduling and managing the distribution of curriculum materials.

k. informing headmasters far in advance of when materials will be available for the schools.

l. working closely with technical advisors assigned to the PCU for training and advisory purposes, particularly the production specialist advisor.

POST: In-Service Teacher Trainer

1. Responsible to: Director, Primary Curriculum Unit

2. Supervisory Responsibilities: This officer, as directed, will supervise the activities of the Teacher Leaders in each of the Teaching Innovation and Distribution Centres.

3. Personal Responsibilities: This officer shall be responsible for:

a. designing and preparing teacher-training programmes and materials required for introducing teachers to new curriculum programmes.

b. working closely with Design and Preparation Specialists to ensure that in-service teacher training programmes are fully co-ordinated with skills required for teachers to use curriculum materials.

c. co-ordinating with in-service course for teachers at William Pitcher concerning curriculum materials, e.g., using, where possible, In-Service materials and ensuring In-Service training schemes include new national curriculum programmes.

d. establishing teaching/learning procedures at Teaching Innovation and Distribution Centres and supervising the activities of Teacher Leaders who will carry out the teaching/learning programme at the TIDCs.

e. work closely with technical assistance advisors who may be assigned to the PCU to train and advise the staff, especially the In-Service Teacher Training Specialist.

POST: Pre-Service Teacher Training

1. Responsible to: Director, Primary Curriculum Unit

2. Supervisory Responsibilities: This officer will not have administrative or management control over other officers in the PCU, unless otherwise directed.

3. Personal Responsibilities: This officer shall be responsible for:

a. designing and preparing teacher-training programmes and materials required for introducing teachers in training to new curriculum programmes in co-operation with teacher-training institutions.

b. working closely with Design and Preparation Specialists to insure that pre-service teacher-training programmes are fully co-ordinated with skills required for teachers to use curriculum materials.

c. organizing liaison between the teacher training institutions and the PCU.

d. teaching special courses or giving lectures at teacher-training institutions related to the work of the PCU.

e. working closely with technical assistance advisors who may be assigned to the PCU to train and advise the staff especially the Pre-Service Teacher Training Specialist.

POST: Evaluation Specialist

1. Responsible to: Director, Primary Curriculum Unit

2. Supervisory Responsibilities: This officer will not have administrative or managerial control over other officers of the PCU, unless otherwise directed.

3. Personal Responsibilities: This officer shall be responsible for:

a. designing and preparing measures of educational progress in all domains of the curriculum.

b. designing, preparing and managing self-corrective evaluation of the primary curriculum and all supporting systems, e.g., production and distribution, teacher-training and evaluation.

c. liaising with computer facilities, including supervising the preparation of data for processing and distributing evaluation data.

d. establishing and managing a progress-reporting system whereby student progress and teacher use of materials will be reported by the teacher and the headmaster, from the headmaster to the District Education Officer, and from there to the Ministry of Education through the PCU.

e. Liaising with the Regional Testing Centre.

f. working closely with technical assistance advisors who may be assigned to the PCU to train and advise the staff, especially the Evaluation Specialist.

APPENDIX E

SWAZILAND CURRICULUM AND EDUCATIONAL MATERIALS DEVELOPMENT: THE FIRST WORKSHOP

LOCATION:	The William Pitcher College, Manzini, Swaziland
DATES:	18 February 1974 - 1 March 1974
CONDUCTED BY:	Dr. Jane G. Schubert and Dr. Paul F. Cook
PARTICIPANTS:	Mr. L. B. Lukhele, PCU Director Mrs. M. Mokogokong, PCU Staff Member Mr. A. Myeni, PCU Staff Member Mr. R. Magagula, PCU Staff Member Mr. A. Simelane, PCU Staff Member Miss D. Ahles, Peace Corps Volunteer assigned to the PCU

I. Activities

Major goals of the 10-day workshop were to introduce participants to the process of developing instructional materials, and to produce a demonstration curriculum module. Workshop activities focused on developing instructional objectives, constructing evaluation devices, preparing instructional strategies, planning for teacher training, and implementation of newly developed materials. Participants received a bound notebook containing 17 selected readings on topics related to workshop activities. In addition, each participant received personal copies of five books concerning instructional materials development. (See Section V for list.)

The first week focused on the introduction of the elements necessary to design and develop instructional materials. Because an underlying aim of the new primary curriculum is to encourage children to think for themselves, the first day was devoted to demonstration of a lesson in which pupils develop personal ideas about subject matter given to them, then test these ideas against data made available by the teacher.

Discussions on this approach, its significance to Swaziland education, and the use and definition of modules in organizing instructional materials was also part of the first session. Prior to exploring module components in detail, the participants chose a topic for the sample module they were to produce during the workshop. "The Celebration and Significance of Five Swaziland National Holidays" was selected. Thereafter, each homework assignment, and subsequent daily activity centered around the development of the module. The second day was devoted to discussion of some readings, and the development of instructional objectives. The difference between overall outcomes and instructional objectives was emphasized. Participants practiced writing instructional objectives, exchanged papers, and revised their original drafts of objectives. Short-term assignments with extensive discussion and feedback comprised most of the workshop activities. Similar procedures were used for further study of module components--evaluation, instructional strategies, and teacher training strategies, although the final component received less emphasis than originally scheduled because of time constraints. As each component was examined and studied, all exercises and practices were directly related to the development of the module on Swazi holidays. By the beginning of the second week the participants had constructed a draft of a 10-lesson module. The workshop was visited by a Swaziland anthropologist, Ms. Thoko Gininza, who spoke to the participants on the origin and celebration of the National holidays. Each module component was developed either individually or by participants who worked in pairs. The materials were critiqued and returned to the participants for revision.

On the seventh day, each participant selected a subject for another shorter module. The participants then began the developmental process again--with continuous assessment provided by one another and by the instructors. Topics chosen for these modules included: "Classifying and Observing" (Grade 1), "Heat" (Standard 3), "Learning about Manzini" (Standard 3), "Graphs" (Standard 4), and "Sugar Production in Swaziland" (Standard 5). Each module emphasizes two or more regularly scheduled subjects in a specific school year. For example, the module on "Graphs" will incorporate learning mathematical concepts and applying these concepts to a handicraft activity by transferring numerical patterns to gingham cloth, then stitching the pattern. The module on "Classifying and Observing" requires students to construct and design their own objects before counting and/or classifying them. These modules were not completed at the conclusion of the workshop, but the development of them continued into the following weeks. The last formal workshop session concluded with a demonstration and discussion of activities to approximately 50 interested visitors and guests. The group included members of the Ministry of Education, and faculty of the In-Service Program, the William Pitcher College, and the University of Botswana, Lesotho, and Swaziland. The reaction was very positive. Visitors acted as students while a PCU staff member taught a lesson. There was a favorable response to the educational strategy and theory upon which the lesson was based, plus public support for the PCU and its work.

II. Outcomes

The workshop outcomes revealed the capability and potential for PCU members to work towards the scheduled work targets. Throughout the workshop, the participants displayed dedication and perseverence in the completion of their tasks. At the conclusion of the workshop, the following outcomes were apparent:

A. The participants shared a communality with respect to their membership in the PCU and dedication to its established goals.

B. The participants displayed a motivation and willingness to learn about an aspect of education about which they had been aware, but had no formal or practical training.

C. The participants demonstrated a capability for learning the concepts involved in the development of curriculum materials by having completed each component contained in a sample module of ten lessons withinthe first six days of the workshop.

D. The participants learned the fundamentals of a modular, integrated approach to the development of instructional materials.

E. The participants demonstrated motivation for continued activity in developing instructional materials by preparing new modules on selected topics.

F. The participants gained confidence in their ability to define and describe the PCU activities, as well as visibility for the PCU, by presenting the results of the workshop to the visitors at the demonstration session.

III. Recommendations for Future Workshops

Based on a debriefing with the PCU, and the experiences and activities of the first workshop, the following recommendations are submitted for future workshops:

A. Relate future workshops directly to the specified work targets, e.g., the preparation of outcomes and instructional objectives which will comprise the PCU syllabus.

B. Prior to completing the PCU syllabus, compare the current Swazi-stated outcomes, organized by the PCU, to the aims listed in each of the existing syllabi. This will enable the PCU to more easily support its choice of outcomes and topics, and substantiate its own syllabus, by illustrating how the PCU outcomes compare and contrast to the current syllabi. Such an exercise will strengthen the PCU recommendations for primary school reform.

C. Directly relate workshop activities to a workshop product with which the participants can identify as a result of their efforts, such as a module.

D. Confine each workshop to a single topic, now that the participants have received some overall orientation in the development of instructional materials. In this way focus can be placed on a central activity which enables the participants to gain experience in specific areas.

E. Establish channels of communication between the PCU and the specialists on each subject panel to ensure the newly designed syllabus will be compatible with the more traditional educational practices.

IV. Recommendations

In addition to the previously identified recommendations, the following overall recommendations are offered for PCU operations:

A. Hold regular PCU staff meetings, perhaps once a week, to keep the PCU members informed of ongoing activities in the Ministry and to open a formal channel of communications whereby staff opinions and suggestions can be offered and discussed.

B. Assign specific tasks for the PCU to complete each week, and require a written report of their accomplishments and planned activities.

C. Schedule time for the participants to become familiar with the Plan so they can speak confidently about primary school reform when so requested.

D. Secure resource materials on Swaziland as well as materials of other curriculum projects to illustrate various options and ways in which subject matter is used by others.

V. Reading List

Dillman, Carol & Rahmlow, Harold F. Writing instructional objectives. California: Fearon Publishers, 1972.

Holt, John. How children learn. New York: Dell Publishing Co., 1967.

Mager, Robert F. Developing attitude toward learning. California: Fearon Publishers, 1968.

Tyler, Ralph. Basic principles of curriculum and instruction. Chicago: University of Chicago Press, 1949.

Washington, Eva. Expert teacher action program. Belmont, California: Fearon Publishers, 1971.

Jane G. Schubert
26 March 1974

APPENDIX F

SWAZILAND CURRICULUM AND EDUCATIONAL MATERIALS DEVELOPMENT: THE SECOND WORKSHOP

LOCATION:	The Primary Curriculum Unit Office, Manzini, Swaziland
DATES:	22 April - 6 May 1974
CONDUCTED BY:	Dr. Jane G. Schubert and Dr. Paul F. Cook
PARTICIPANTS:[1]	Mr. L. B. Lukhele, PCU Director Mr. R. Magagula, PCU Staff Member Mrs. M. Mokogokong, PCU Staff Member Mr. A. Myeni, PCU Staff Member Mr. A. Simelane, PCU Staff Member Miss D. Ahles, Peace Corps Volunteer assigned to the PCU

I. Activities

This second workshop directly addressed one of the project work targets--preparation of a preliminary primary school syllabus. The syllabus will consist of two parts. Part I will identify educational outcomes by subject areas. For each outcome there will be a sample list of the types of student behaviors which indicate achievement of the outcome. Part II will contain examples of how these outcomes will be integrated into instructional modules.

The indicator behaviors for each Part I outcome will constitute the basis for defining each module's instructional objectives. The sample module will contain illustrative evaluation devices which measure the extent to which the instructional objectives are met. Suggested teaching strategies for each module will also be included. Thus, Part I of the syllabus will be organized by subject (e.g., English, Mathematics, Science, Self-learning skills, etc.), while Part II will integrate within module topics several outcomes selected from each subject. For example, a module may include outcomes from English, Mathematics, Crafts, and Self-learning. The major purpose of this workshop was to develop Part I of the syllabus, and one illustrative example of Part II which will demonstrate the integration of subjects into modules.

Workshop activities centered on identifying specific student behaviors which would indicate achievement of each primary school outcome. A PCU draft working paper, of future student outcomes for primary school, was used as the basis for identifying the student behaviors. The PCU primary school outcomes were organized by subject. Each subject contained outcomes for the cognitive, affective, and psychomotor domain. Within each domain, outcomes were separately listed for the lower primary and upper primary students. The total number of future student outcomes for primary school listed by the PCU was 255.

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[1] Two students from the University of Botswana, Lesotho, and Swaziland attended the workshop for two days.

The workshop began with a discussion of outcomes which had been prepared by the PCU. The sources, data base, and criteria, as in the National Primary School Curriculum Plan, were used as a basis for selection of these outcomes. The staff also critiqued objectives and outcomes from related projects, and compared them to PCU outcomes, before establishing individual behaviors for each outcome. The workshop format included large group discussions as well as working in small groups individually. Final selection of behaviors, however, rested with the entire PCU, which made these decisions on a group basis. By the conclusion of the eighth day of the workshop, the PCU developed 1,027 behaviors associated with the 255 outcomes.

The workshop also focused on integrating the outcomes and behaviors of each subject into a specific module topic. The participants discussed a number of possible module topics, and chose to integrate outcomes within a module on "Trees." Selected outcomes were then used to determine the composition of the "Trees" module for Standard II. The participants worked together to review, discuss, and select outcomes to include in "Trees." Having selected the outcomes within each of the three domains, participants then developed instructional objectives based on the behaviors within each outcome. As the objectives were specified, evaluation measures were also designed to measure the degree to which each of the objectives would be achieved. The completion of this activity illustrated Part II of the syllabus. However, this serves only as one illustration, as selection of every module to be developed for the primary school curriculum would be premature at this time. A few sample illustrations of this type for Part II will demonstrate, to the reviewers of the syllabus, the manner in which the subjects will eventually be integrated. Further illustrations will be developed by the PCU before the syllabus is submitted to reviewers.

The final workshop activity established a model for continued work beyond the workshop conclusion. This activity was the next step toward completing Part I of the syllabus. Having identified sample behaviors for each outcome, it was necessary to review all outcomes and behaviors for repetition, overlap, ambiguity, lack of parallelism, etc. With the workshop leaders, the PCU staff examined all outcomes and behaviors within a single subject area--mathematics--to revise and edit the initial workshop efforts. The result of this activity was a considerable reduction of the number of outcomes and behaviors, plus an elmination of repetitious items to make the items more parallel. That is, behaviors which seemed to be outcomes were placed at the appropriate level and vice versa. During the workshop, this editing and revision was completed for only one subject area, but the process for continuation of this activity was established. At the conclusion of this activity, each PCU member was asked to write a description of the PCU syllabus.

Throughout the ten workshop days, and for an additional week following the formal workshop, supplemental activities took place which were related to ongoing work at the Primary Curriculum Unit. For example, modules previously written by each of the staff members were reviewed and individual conferences were held with each staff member to discuss suggested module revisions. In addition, a meeting was held with the PCU to discuss the results of the field tests of some of the lessons in each module, and suggestions were made regarding the continuing field tests. The PCU also viewed three filmstrip/recordings from the PCU library on development and evaluation of instructional materials. Each PCU member received a copy of Principles of Instructional Design by Robert M. Gagne and Leslie J. Briggs (New York: Holt, Rinehart & Winston, 1974). Specific assignments were completed during the workshop using selected chapters of this text.

The two following sections of this report reflect outcomes and recommendations related to specific workshop activities.

II. Outcomes

At the conclusion of the workshop, the PCU staff produced the following:

A. Part I of the preliminary primary school syllabus. This contained 1,027 behaviors identified under 255 outcomes.

B. An illustrative example of an integrated module using outcomes from Part I. Included in this example were instructional objectives, evaluation devices, and suggested teaching strategies.

C. An edited version of outcomes and behaviors within one subject area of Part I.

D. Descriptions of the PCU syllabus by each PCU staff member.

III. Recommendations for Future Workshops

Based on the workshop activities, the following recommendations are made:

A. Completely edit and revise the preliminary primary school PCU syllabus, Part I, prior to distribution for review outside the PCU.

B. Include Part II, which contains two or three illustrative examples of the integration of subject areas into modules, in the syllabus which is distributed for review.

D. Have the PCU staff gain extensive experience related to the development of instructional materials by trying out various module formats, teaching strategies, evaluation devices, and so on, so that they will have information useful for decision-making about the curriculum materials.

D. Future workshops should support this range of experience by providing activities which can be continued following the completion of the workshops. For example, one workshop could be devoted to field testing and classroom observations, another could focus on various types of instructional strategies, and another could cover evaluation with an emphasis on mastery and diagnostic devices built into modules.

E. The PCU should strengthen its attempt to interact with the educational community through various activities such as special meetings with the subject panels at the PCU, and production of the previously-discussed PCU newsletter.

Jane G. Schubert
23 May 1974

APPENDIX G

SWAZILAND CURRICULUM AND EDUCATIONAL MATERIALS DEVELOPMENT: THE THIRD WORKSHOP

LOCATION:	The Primary Curriculum Unit Office, Manzini, Swaziland
DATES:	9 September 1974 - 20 September 1974
CONDUCTED BY:	Dr. David J. Klaus and Dr. Paul F. Cook
PARTICIPANTS:[1]	Mr. L. B. Lukhele, PCU Director Mrs. M. Mokogokong, PCU Staff Member Mr. R. Magagula, PCU Staff Member Mr. A. Simelane, PCU Staff Member Mrs. Zwane, siSwati Panel Member Mrs. Mthembu, siSwati Panel Member Miss D. Ahles, Peace Corps Volunteer assigned to the PCU

I. Activities

Overall goals of this third workshop were to acquaint the participants with alternative instructional strategies that could be applied to the development of modularized curriculum materials, and to provide practice using these strategies to design instructional units suitable for classroom use. The content area chosen for workshop activities was oral and expressive siSwati, although the full range of instructional content in the primary grades was considered during discussions and demonstrations and in homework assignments. The special attention given to oral and expressive siSwati was predicated on the virtual absence of any present instructional materials in this important area, and the variety of types of instructional objectives which represent criterion performance in this area.

The principal focus of the workshop was to select and implement instructional strategies which maximize student practice, and insure that each step of this practice would correctly be performed and lead to satisfaction on the part of the learner in terms of awareness of his own progress. To organize this practice, it is first necessary to determine what kind of practice the learner must have, and then design materials which systematically elicit this needed practice. Different kinds of practice are necessary for the various objectives and skill areas. For example, quite different skills are involved in comprehending an unfamiliar word appearing in written siSwati versus using a newly learned word while producing comprehensible siSwati for others to read.

On the first day of the workshop, a general introduction to the process of learning was presented, and an overall understanding of effective teaching was derived from these fundamental concepts. On the second day, the problem of learner variability and methods for designing curriculum materials suitable for the needs of different learners was discussed. The third day was directed at ways of organizing and controlling practice to make it as relevant, realistic, and error free as possible. The role of the classroom teacher in the instructional process was considered on the fourth day, with special emphasis on creating opportunities for learners to practice rather than doing the practice for them. On the fifth day, longitudinal learning problems were considered, and distinctions made between enabling, micro, macro, and meta objectives in terms of the learning strategies suitable for each.

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[1] Several other persons attended individual sessions as guests of the PCU.

The sixth day was devoted to the various ways instructional materials may be presented in class, such as through textbooks, films, recordings, and exercise sheets. Special problems associated with the design of instructional strategies for higher-order goals, including judgment, creativity, cooperation, and discovery, were discussed on the seventh day. The eighth day was used to examine the relationship between the selection of instructional strategies and the techniques used to assess instructional outcomes. On the ninth day, various instructional materials now in use in Swaziland, or contained in the Primary Curriculum Unit library, were reviewed to provide the staff with practice in determining the quality of such materials in terms of appropriateness of the strategies represented in them. The tenth, and final, day was devoted to a review of the workshop with special reference to the kinds of objectives recently established for primary school education in Swaziland.

Part of each day was devoted to the application of these principles and concepts to oral and expressive siSwati. The participants each prepared several trial lessons aimed at various skills in this area, including the acquisition of new vocabulary, the composition of proper sentences, and learning to speak aloud in correct siSwati. Curriculum requirements for an entire year of instruction were considered, and the general sequence of topics and skill development within the year was established. The role of instructional media in this sequence was discussed, as well as the kind of teacher guidance required to insure the proper implementation of these lesson formats.

II. Outcomes

By the completion of the workshop, the participants demonstrated improvements in their skill with respect to:

A. assessing existing curriculum materials in terms of the adequacy and appropriateness of the practice opportunities they provided;

B. suggesting ways in which existing curriculum materials could be improved through the use of more carefully selected instructional strategies;

C. devising alternative instructional strategies appropriate for various primary-level objectives; and

D. initiating the development of model curriculum materials in oral and expressive siSwati appropriate for use in Swaziland schools.

III. Recommendations for Future Workshops

On the basis of what was, and what was not, accomplished during this workship, these recommendations are made with respect to future workshops:

A. More extensive planning should precede future workshops in terms of identifying sub-topics of particular interest to the participants and in terms of selecting workshop exercises directed at very specific instructional objectives. If possible, participants should discuss these options beforehand and make their recommendations well in advance for what should be included in the workshop.

B. Some amount of time should be set aside each day for non-workshop activities. Telephone calls, visitors, and other obligations of the PCU staff caused continuing interruptions. One or two brief periods should be reserved for everyone to meet their PCU administrative responsibilities.

C. Greater emphasis should be given to specific, practical issues rather than to problems which call for discussions at the conceptual level. The majority of participants did not have the breadth of experience that would be needed to convert principles to applications without assistance.

D. Future workshops should be longer than ten days to permit developing projects further along toward their conclusion than was possible during this one. Although an adequate beginning was made on the development of model lessons dealing with oral and expressive siSwati, the endeavor did not proceed far enough to insure its smooth continuation.

E. This workshop included some subject-panel members as well as PCU staff personnel as participants. This practice enhanced the discussions and the quality of the activities and should be continued in future workshops.

David J. Klaus
18 December 1974

APPENDIX H

SWAZILAND CURRICULUM AND EDUCATIONAL MATERIALS DEVELOPMENT: THE FOURTH WORKSHOP

Location:	The Primary Curriculum Unit Office Manzini, Swaziland
Dates:	13th January, 1975 - 27th January, 1975
Conducted by:	Dr. Walter E. Hathaway and Dr. Paul F. Cook
Participants:	Mr. L.B. Lukhele, PCU Director Mr. M. Dlamini, PCU Staff Member Mr. G. Mabila, PCU Staff Member Mr. R. Magagula, PCU Staff Member Mrs. M. Mokgokong, PCU Staff Member Mr. A.E.F. Simelane, PCU Staff Member Miss D. Ahles, Peace Corps Volunteer assigned to the PCU

I. Activities

The major focus of this Fourth Workshop was upon the production of outcomes, instructional objectives, and evaluation devices for the Grade I curriculum. The tentative production outcomes of the Workshop were reviewed at the outset and were modified to reflect the current state of the PCU's activities. The outcomes finally adopted as the production targets for the Workshop were the following:

A. To produce criteria for review and production of outcomes, instructional objectives, and evaluation devices.

B. To review the Grade I outcomes in the nine subject areas in which they had already been developed and to revise these outcomes to meet their criteria.

C. To produce Grade I outcomes in the three subject areas in which they had not yet been developed.

D. To produce instructional objectives for the Grade I outcomes.

E. To develop and practice skills of producing evaluation devices for the instructional objectives.

A major portion of the first day of the workshop was devoted to a review of the nature and character of the three elements of the project's curriculum development plan with which we would be working: outcomes, instructional objectives, and evaluation devices. We also investigated the relationship of these three elements to other elements of the project, such as aims, indicator behaviors, modules, teaching strategies and guides, student and teacher materials, teacher training, curriculum evaluation, and materials production. This review and discussion of the project's components was especially useful to the two staff members who had just joined the PCU prior to this workshop.

A 150 page book of readings and models, prepared by Dr. Hathaway, was presented to each participant to be referred to during the Workshop and to help toward the achievement of the above production outcomes and their related instructional outcomes.

The second day of the Workshop was devoted to the development of the criteria for the outcomes (See Attachment A) and the application of these criteria by the staff of the PCU to the review of the Grade I outcomes in Mathematics, Science, Social Science, and English.

The next three days of the Workshop saw the review and revision of the Grade I outcomes in siSwati, Domestic Science, Physical Education, Music, and Agriculture and the production of Grade I outcomes in Arts and Crafts, Religious Knowledge, and Self Learning. Thus, by the end of the first week the second and third production outcomes had been achieved in their entirety and the first at least partially.

At the beginning of the second week of the Workshop criteria were developed for the production of instructional objectives (See Attachment B). After review of numerous examples in all three domains (cognitive, affective, and psychomotor) and after extensive group practice in applying the criteria, the PCU staff began developing instructional objectives for Grade I outcomes. In the process of developing the instructional objectives, numerous resources were used, including the sample models in the book of Workshop readings and the syllabi and curriculum materials currently in use in Swaziland.

On Thursday afternoon work on instructional objectives was halted while we turned to the development of our final set of criteria, namely those for the production of evaluation devices to measure the instructional objectives (See Attachment C). Practice in applying these criteria to the production of evaluation devices carried over into Friday morning when we returned to the writing of instructional objectives. By the end of the workshop on Friday afternoon complete sets of instructional objectives had been written for the Grade I outcomes in Mathematics, Science, Social Studies, Agriculture, Physical Education, and Self Learning. In addition, the instructional objective sets for English, siSwati, and Domestic Science had been nearly completed. Thus by the end of the workshop our first, second, third, and fifth production outcomes had been attained completely and the fourth partially. It is expected that the fourth production outcome will be completed by the PCU staff during the two weeks following the workshop.

II. Outcomes

Upon the completion of the Workshop, the participants had achieved the following:

A. Development or enhancement of knowledge of the elements of the projects' curriculum development plan and the relationships among those elements.

B. Development of sets of criteria for the production and review of outcomes, instructional objectives and evaluation devices.

C. Revision or production of a complete set of outcomes for Grade I.

D. Production of more than half of the instructional objectives needed to cover the Grade I outcomes.

E. Development or enhancement of skills of producing evaluation devices to measure instructional objectives.

III. Recommendations for Future Workshops

On the basis of experience with this workshop, the following recommendations are made for future workshops:

A. The criteria, definitions, conventions, and procedures which have been developed by the PCU staff should be assembled in a "Consultants Handbook" and shared with all consultants at least a month before they conduct a workshop. In this way the PCU staff would be spared unnecessary confusion due to the extensive diversity of language and convention in the new and rapidly evolving field of objective based curriculum and evaluation.

B. Future workshops should focus upon meeting the specific production outcomes and deadlines toward which the PCU staff is working at the time. For example, the upcoming workshop on "Affective Learning" should focus upon the review of the affective outcomes and instructional objectives of the Grade I curriculum and upon the development of evaluation devices for all instructional objectives, cognitive and psychomotor, as well as affective. Moreover, the workshop should be concerned with the development of the examination which must be developed and given by mid-April to test the effectiveness of the current Grade I curriculum in meeting the proposed Grade I outcomes. Finally, attention should be given in the workshop to the question of how the proposed modules and other curriculum materials should be organized to lead to the accomplishment of outcomes and instructional objectives.

C. During the workshop (and, more importantly, between workshops) specific objectives and tasks should be identified for the participants and frequent evaluations should be made of progress toward achieving the objectives and completing the tasks.

Walter E. Hathaway
15 February 1975

ATTACHMENT A

Criteria for Development of Outcomes

I. The Outcomes for Grade I should describe what learnings the child must have attained by the end of Grade I in order to make a year's appropriate and satisfactory progress toward the attainment of the "Outcomes for Lower Primary" - (End of Standard II outcomes) which have been approved by the Ministry of Education. Similarly, the outcomes for each other Grade or Standard should build upon the outcomes of the previous Grade or Standard to lead toward the attainment of the Lower and Upper Primary Outcomes.

II. Base Criteria

1. Level of specificity. Does the outcome fall into a middle range on the generality-specificity continuum so that it is less general than the overall "Aims" of the Primary Curriculum and more general than multiple instructional objectives which will lead to its attainment?

2. Principal performance. Does each outcome clearly describe a single significant, life relevant performance (not a teaching or a learning strategy) which is desired to be manifested by Primary school children by the end of the Grade or Standard for which it is an outcome? Does the entire set of outcomes in a subject area comprehensively cover all the significant performances to be manifested?

3. Observable Behavior. Is the behavior called for in the outcome sufficiently overt so that valid and reliable evaluations of its attainment or non-attainment may be made?

4. Method or Process. If a method or process is an important and integral part of the outcome is it included in the outcome?

5. Relevant Conditions. If there is a necessary condition under which the outcome is always to be exhibited is it included in the outcome?

III. Formal Criteria

1. Does the outcome have "the child" as its implicit subject?

2. Is the verb of the outcome stated in the present tense?

3. Is the language in which the outcome is expressed readily understable by those who will be asked to approve it or work toward it, especially the teachers?

4. Is the language in which the outcome is expressed clear, precise, and grammatical?

ATTACHMENT B

Criteria for Development of Instructional Objectives

I. Instructional objectives should describe what learnings the child should attain by the end of a unit of instruction, normally a thirty minute period of teaching. They should be inferred from outcomes and should describe the learnings (in sequence if appropriate) necessary for the attainment of that outcome.

II. Base Criteria

1. Level of Specificity. Is the instructional objective more specific than either the "aims" of "outcomes" to whose attainment it should contribute?

2. Principal Performance. Does each instructional objective clearly describe a single, significant performance (not a teaching or learning activity) toward whose attainment a unit of instruction can be directed?

3. Observable Behavior. Is the behavior called for in the instructional objective sufficiently overt so that valid and reliable evaluations of its attainment or non-attainment can be made?

4. Method or Process. If a method of process is an important part of the objective is it included in the objective?

5. Relevant Conditions. If there is a necessary condition under which the objective is always to be exhibited is it included in the objective?

III. Formal Criteria

1. Does the objective have "the child" as its implicit subject?

2. Is the verb of the outcome stated in the future tense? (Note: avoid "will be able to" when the more direct "will" may be used except when the focus of the objective is the child's ability to do something rather than his actually doing it).

3. Is the language in which the outcome is expressed readily understandable by those who will be asked to approve it or work toward it? (Especially the students, since once we get beyond the lower grades the objectives of the instruction should be shared with the students).

4. Is the language in which the outcome is expressed clear, precise, and grammatical?

ATTACHMENT C

Criteria for Development of Evaluation Devices for Instructional Objectives

I. Be sure the instructional objective is clear and appropriate for the children for whom it is intended. If not, improve it! Further, improvements may also suggest themselves in the course of constructing the evaluation devices. Make them!

II. Base Criteria

1. Evaluation devices should measure only the behavior described in the instructional objective.

2. Evaluation devices should measure all the behavior described in the instructional objective.

3. Evaluation devices should state the indicator behavior clearly, i.e. they should clearly indicate what the child is to do to show he has mastered the objective.

4. Evaluation devices should be in language understandable to those to be tested.

III. Formal Criteria

Evaluation devices should:

1. Clearly indicate the instructional objective of which it is a measure, referring to it by code and possibly actual text.

2. Be a complete sentence or group of sentences.

3. Give clear description of all relevant conditions of performance, including required materials, etc.

4. Give clear directions on how the child is to respond. (They can be same for a whole group of items).

APPENDIX I

SWAZILAND CURRICULUM AND EDUCATIONAL MATERIALS DEVELOPMENT: THE FIFTH WORKSHOP

LOCATION: The Primary Curriculum Unit Office, Manzini, Swaziland

DATES: 10 February 1975 - 21 February 1975

CONDUCTED BY: Dr. Vincent N. Campbell and Dr. Paul F. Cook

PARTICIPANTS:
Mr. L. B. Lukhele, PCU Director
Mr. A. Dlamini, PCU Staff Member
Mr. S. Dlamini, PCU Staff Member
Mr. G. Mabila, PCU Staff Member
Mr. R. Magagula, PCU Staff Member
Mrs. M. Mokogokong, PCU Staff Member
Mr. A. Simelane, PCU Staff Member
Miss. D. Ahles, Peace Corps Volunteer assigned to the PCU
Mr. R. Moore, RTC (Part-time)
Mr. A. Mkhanazi, RTC (Part-time)
Mr. M. J. Dlamini, District Education Office (Part-time)
Mr. A. J. Lukhele, Primary Inspector (Part-time)
Mr. J. M. Shabangu, Primary Inspector (Part-time)

I. Activities and Recommendations

Although the main focus of the workshop was Education for Affective Development, considerable time was spent on the tasks and procedures that would be useful in the total mission of Primary Curriculum Development. After a review of progress to date and much discussion of specific issues, the following steps were adopted as the most practical procedure for completing modules of instruction for Grade I in time for implementation in 1976.

A. Task Analysis

For each upper primary outcome there is an analysis of the sub-skills and prerequisite knowledge and attitudes necessary for students to achieve that outcome. This is naturally not as sophisticated an analysis as might be done by Gagne with $100,000 available for each major outcome. But it does provide a check to see that important prerequisite skills are identified, and that lower primary outcomes adequately state those prerequisites. In addition to prerequisite skills and knowledge, the kinds of situations to which the outcome might be employed are listed and graded in difficulty from easy to difficult. This graded list is then used to plan the scope and sequence.

B. Scope and Sequence

This is a chronological outline of the major kinds of learning techniques and situations that are likely to be most effective over the seven years of primary school in achieving the outcome. It is not a scope and sequence in the traditional sense of merely a list or outline of content to be "covered." The emphasis is upon teaching and learning techniques and the basis for planning such techniques is the task analysis of each outcome. Scope and sequence need not be done separately for each outcome. All the siSwati outcomes were grouped together because of their close interrelationships and were put into a single scope and sequence. In the case of other subject areas, probably no more than five or six such sequences need be developed for each. In social studies, for example, a scope and sequence might be developed for each of the following areas:

- Swaziland history, traditions, values and peoples;
- ancient civilizations and other world cultures;
- modern technology and economic development; and
- group skills and democratic values.

The logical next step would be rough design of all modules in the primary school in such a manner that different subject matters can be integrated before detailed work is begun on specific modules. Because of time pressure, however, it was agreed that only a preliminary outline of major ways in which subject matters would be integrated should be attempted at this point.

C. Develop Grade I Modules

During steps one and two, learning resources and good ideas for teaching will have been identified and filed as a resource for use during module development. The sequence of actions and time estimated for development of the average module by a team of two PCU staff members is as follows:

Design module. Including instructional objective measures to be used in evaluating progress, basis for organizing module (topic, sub-skill, or situation), rationale for how module fits in scope and sequence, student grouping presumed (whole class, small groups, or individualized), teacher capabilities assumed, and production constraints. (Total time to design module: one week.)

Draft module. Including materials to be provided teacher and students, preparation by teacher, evaluation devices in detail, learning activities, and prerequisite modules. (Total time: 2½ weeks.)

Try out module. In one school and revise as necessary. (Total time: 1½ weeks.)

Approval. Outside approval may require several weeks, during which time the team is developing other modules.

This is a fairly demanding sequence and still does not allow completion according to schedule. Because of the importance of having an entire Grade I curriculum in use in the pilot school by early 1976, the following procedure is recommended. After scope and sequence are completed for all subjects, examine the existing primary curriculum and other new curriculum materials (ETA, In-service) and decide which are adequate for use in Grade I with only minor additions to the teacher's manual. Put these into module format specifying clearly the instructional objectives and evaluation devices to be used. Thus, in this first stage new modules will only be developed for those objectives which are most neglected or appear to be least adequately taught.

Films, equipment, and materials which are costly but important for student learning should be purchased in whatever number of copies can be afforded and rotated or "request scheduled" throughout the region or the nation. This requires a flexible order of modules, so the order in which modules are taken by students should only be fixed where there are really critical prerequisites. Also, when expensive materials are involved, the modules should be organized to make the maximum use of such a situation while it is available rather than organized by topic or subskill.

To the extent possible, instruction will be oriented toward specific instructional objectives which can be mastered during the module. To the extent feasible, such modules should be individualized so that students can be pretested and bypass those modules which they do not need, thus concentrating module resources on those who need them.

However, some important objectives and outcomes are not achievable in a single module, and it is important that they not get lost in the mass of individual modules. Objectives such as maintaining interest in a particular subject matter can be monitored for each student on a regular basis and classroom management procedures should be monitored to ensure that the school environment makes the probability of maintaining interest as high as possible. The same rationale applies to those character objectives for which specific modules are not designed but which are to be learned (we hope) mainly through effective behavior modelling by the teacher or other adults and older children present.

The original plan was to specify all instructional objectives in advance before module development began. After some discussion it was tentatively decided that instructional objectives for a module could be specified at the time that module is designed. This poses the danger of objectives being geared too closely to the instruction process, but it has the advantage that instructional objectives will be realistically geared to the way in which the subject matter is divided into modules, and at the same time a module is designed, instructional objectives may come to mind that did not occur in advance. Particular teaching techniques and learner practice that are designed as part of the module will also often provide good means for evaluating student progress and will make clear what instructional objectives can and should be evaluated. Certainly it is logical to specify the instructional objectives as early as possible in the module design, since the logical sequence is objectives first, then learning experiences. However, instructional objectives themselves need to be reviewed and revised to see if they do seem to directly lead to achievement of the important primary school outcomes. If this review of instructional objectives is a regular part of the curriculum building process, it can serve the dual purpose of ensuring relevance to outcomes and ensuring that objectives are not geared solely to the teaching process.

Principles, problems, and priorities were discussed with workshop participants in each of the following areas as presented in the workshop outline handout:

Self-improving educational systems. As applied both to the total curriculum development process and educational progress for individual children.

Objectives and outcomes. Principles of developing good objectives were verified in the form presented by previous consultants, but the point was emphasized that the objectives themselves need not state overt observable behaviors or need not consider matters of whether measures can be developed for those objectives. The criteria of overtness and measurability should be considered separately at the time measures are developed. Otherwise many good objectives do not appear in the curriculum or are forced into performance language, and this is not necessary.

Measures of progress and achievement. Principles, purposes, and types of measures were examined including discussion of different stimulus and response formats. For outcomes in the area of character, interest, and motivation, it appears that critical incident checklists and rating skills will be most practical for teacher use.

Teaching strategies. Discussion included general principles of selecting techniques and discussion of specific approaches taht seemed most promising for affective development.

Organizing the total curriculum. Including components of the total system of information needed by the teacher and information needed by curriculum developers.

In addition to the outline, three separate handouts were distributed to all participants: (1) summary of draft objectives by type of behavior; (2) theory of affective development and implications for curriculum planning, including a list of specific teaching/learning techniques for affective objectives; and (3) types of indicators and measures.

The following three forms for evaluative information about each student and classroom activities were drafted: (1) classroom behavior incidents; (2) student term summary; and (3) module activity record.

Ways of obtaining community support for the work of the PCU were discussed and several suggestions regarding promising techniques were made. These included more informative ways of communicating with parents about student progress, obtaining greater participation in school committees and parent teacher organizations, and principles for effective diffusion of innovations to public officials and teacher education institutions whose support is needed.

Discussions were held with members of the Ministry of Education, staff of the Regional Testing Center, and selected individuals in other curriculum development projects in Swaziland. A lecture and discussion by Dr. Campbell was conducted at William Pitcher College and was attended by about 60 members of the faculty and student body.

II. Production Outcomes

In addition to the new procedures and plans developed, and the acquisition of greater understanding and skills in achieving each of the steps in the plan, participants spent part of their time practicing the use of these skills in actually developing products:

Task analyses. Were completed for siSwati and parts of other subject matter as follows: values, equal rights and individual freedom (Social Studies), using the dictionary, classifying, handling personal finance, and industry in Swaziland.

Scope and sequence. Were completed for siSwati.

A complete module. Was designed for learning to read and speak vowels in siSwati.

Evaluation devices. Were prepared in the following areas: safety procedures, good health habits, scientific explanation, interest in environment (science), interest in sets (mathematics), interest in English, and interest in siSwati.

Because of the broad scope of the workshop, it was decided from the beginning not to attempt to complete any of the above tasks but rather to have a limited amount of practice in each with guidance.

Vincent N. Campbell
16 March 1975

APPENDIX J

SWAZILAND CURRICULUM AND EDUCATIONAL MATERIALS DEVELOPMENT: THE SIXTH WORKSHOP

LOCATION:	The Primary Curriculum Unit Office, Manzini, Swaziland
DATES:	10 March 1975 - 21 March 1975
CONDUCTED BY:	Dr. Christian O. Agbenyega and Dr. Paul F. Cook
PARTICIPANTS:	Mr. L. B. Lukhele, PCU Director Mr. S. Dlamini, PCU Staff Member Mr. A. Dlamini, PCU Staff Member Mr. G. Mabila, PCU Staff Member Mr. R. Magagula, PCU Staff Member Mrs. M. Mokogokong, PCU Staff Member Mr. A. Simelane, PCU Staff Member Miss. D. Ahles, Peace Corps Volunteer assigned to PCU

I. Suggested Objectives of Workshop

The Instructional Objectives of this Sixth Workshop were originally meant to focus on the identification of appropriate teaching strategies that will help to reach the instructional objectives in Grade I. The participants were expected to demonstrate ability to prepare such teaching strategies, teachers guides, pupil materials, and supporting visual aids. Participants were further expected to identify any innovative strategies that might be useful in the Swaziland environment. To be able to help teachers use such innovations, teaching strategies and accompanying teaching aids to the children, it was considered necessary to get workshop participants to identify some of the psychological factors that manifest themselves in the development of children in Swaziland at the Grade I level. The production target was to get participants to generate teaching aids for selected instructional objectives in Grade I.

II. Activities

A. Rationale

Materials read during the previous five workshops indicated that participants (mainly PCU staff) have had considerable training in the determination and writing of outcomes as well as the subskills that will help toward the achievement of such outcomes. It appeared to us from the beginning that most of these outcomes for which subskills have been identified tended to focus mainly on intermediate level objectives. Further analysis showed that most of these subskills relating to the identified outcomes, written by the staff since the last workshop, are likely to help mainly in the development of cognitive abilities. We realized also that if we made the attempt to sequence only material already produced, without reference to the existing practice, it would be difficult to defend any radical changes that the PCU was trying to bring about. The most important issue here is to study what syllabuses/curricula that exist and are already known to teachers and Ministry officials and then to build up and improve upon these through the new approaches (identification of outcomes and subskills in the cognitive, affective, and psychomotor domains) that the PCU staff have learned.

B. Theoretical Discussions

A paper distributed to the group formed the basis of our theoretical discussions and the practice sessions that followed. We identified the need to consider seriously the general (and usually vague) aims of education as contained in the Second National Development Plan of Swaziland. The keynote is to make education relevant to rural development. We then discussed the teaching strategies that can be used in order to arrive at these general aims. We agreed that the outcomes which have been written up, and then broken down into subskills, can be manipulated effectively to lead to the major non-observable aims stated in the general goals. We agreed further that, since the PCU needs support from existing institutions such as the Teaching Service in the country as well as the Ministry, it will be necessary to base any new curriculum change on ideas that will be easily acceptable; i.e., such changes should start from the "known to the unknown." What is important for the PCU and the donor countries is the establishment of the fact that the new curricula have some real innovative dimensions which will be acceptable to the Swaziland people.

C. The Approach from the Known to the Unknown

The subject area approach was considered very convenient and more likely to be acceptable to the Swazi people since this is what they know. The onus is on the present workshop consultants to direct and train the PCU staff to use the subject matter approach to achieve the outcomes, and to link these toward the achievement of the general and long-term aims. Teaching strategies, teaching materials, visual aids, etc., for Grade I, as requested by the original objectives of this Workshop, were then identified and the preparation of these were considered.

The following broad subject areas were identified for Grade I: siSwati and English; Mathematics; Science; Cultural Studies; and Physical Education. Other subject areas such as Music, Arts and Crafts, Religious Knowledge, Geography, History, Civics, and Health were integrated as appropriate within these five areas. As the PCU itself was not sure about what the Ministry's ruling will be with respect to the types of subjects that would be handled in Grade I, the Workshop decided tentatively that those subject areas that cannot be disputed (siSwati, English, Mathematics, Science, and Physical Education) should be focused upon. Subjects such as Music, Arts and Crafts, Social Science, and Religious Knowledge (now being grouped together under Cultural Studies) will be taken care of under siSwati and English.

Another important problem that faced the Workshop was the indication that the structure of the school system was going to be changed. There are definite plans to reduce the number of primary school years. Whatever form it will take is not yet certain. As this change will definitely affect the materials that each class will be expected to handle, it was thought prudent to request the Ministry to make a decision quickly. In a meeting held with the Chief Education Officer, arrangements were made for the PCU Director and the Advisor to meet Ministry officials the week following immediately after the close of the Workshop. However, these uncertainties did not in any way deter the Workshop from achieving its primary goal of identifying teaching strategies that will help to focus learning on the environment.

D. The "Survival Kit" Approach and Subject Integration

In the treatment of subjects (knowledge), participants were taught to identify certain threads (Taba), structure (Bruner), or core ideas that will lead toward consistent sequencing that will in turn lead to the achievement of the cognitive outcomes envisaged, and, most importantly, participants have learned to use these connecting threads to help focus the child's activities and mind on important issues that affect his environment. For example, in the treatment of English as a language for communication, the register of vocabulary should derive mainly from the environment (agricultural vocabulary, family activities, etc.). The stories the child reads should similarly derive from native folklore, etc. It is hoped that if this approach is used in all the subject areas, the child will be gradually tuned psychologically to develop an awareness toward his environment. This will become an important part of his "survival kit." It should also be possible to develop "do-it-yourself" materials with some kind of a vocational bias. Children could learn to practice the building of miniature structures from the Grade I level. This could lead to the construction of real structures in higher classes. Examples of how these can be done were discussed, but since the main objective of the workshop is on Grade I (where very little of this approach is likely to take place), we were not able to practice the approach. The idea has, however, been well grasped.

III. Practice and Production

A. Practice

(1) The workshop participants identified core ideas and the threads along which they can plan topics in their own subject areas.

(2) Relevant outcomes were grouped around these core ideas.

(3) The outline of lessons that focused on a few of such outcomes were written for practice purposes. The subskills that were identified during previous workshops were used in the formulation of such lesson outlines.

(4) Lesson outlines were built on ideas that are relevant to the

environment and to the future survival of the child.

The first week of the workshop was devoted to such practice exercises and discussions. The group learned to synthesize all that they had been doing so far.

B. Production

A more thorough study of the old syllabuses was undertaken. Materials from the In-Service Training Courses at William Pitcher College were also studied. Comparisons were made and the outcomes and subskills prepared by the PCU were being added in some cases to build up a comprehensive framework along which Learning Units (Modules) and the individual lessons that go to build up such units can be prepared.

Work on this aspect started at the beginning of the second week and it proceeded according to schedule throughout the week. Participants have to be commended very highly for their perseverance and high spirited approach in working diligently to get the work accomplished.

IV. Recommendations for Future Planning

All during the workshop it became clear that if the curriculum project and the innovations envisaged will ever come to fruition it will depend upon the people of Swaziland and particularly the teachers that will help implement the program. This view has been clearly stated in the Project Plan. The PCU has to devise a means whereby competent teachers, either at the elementary, secondary school, or university levels, will play a significant part in writing up the main booklets that will detail the step-by-step approach to the type of teaching envisaged. With the expertise that the PCU has acquired during these six workshops, the team should be able to plan a strategy whereby all school districts may be involved in the operation.

It may also be necessary for the PCU staff, in its public relations efforts, to point out that rural development was not synonymous with agricultural output and rising statistics of farm production. A new and broader vision should be kept in view in the planning of "survival kits" so that long-range development goals may be kept in mind. These long-range goals should equate rural development with far reaching transformation of social and economic structures and institutions. Existing institutions must be identified and used to foster such goals. The principal components of such goals should be the generation of new employment, more equitable access to arable land, more equitable distribution of income, widespread improvement of health, nutrition, and housing, greatly broadened opportunities for all individuals to realize their full potential through education, and a strong voice for all rural people in shaping the decisions and actions that affect their lives. Subject areas could be used as a means for the propagation of such ideas.

Christian O. Agbenyega
18 April 1975

REPORT FROM PRIMARY CURRICULUM UNIT

A Summary National Primary School Curriculum Plan

by **DR. PAUL COOK** (Primary Curriculum Advisor)

WHAT is curriculum? In using this word, this report refers to the term in a very broad sense. It is a planned sequence of student experiences in an educational setting designed to accomplish certain overall aims. It is both the products and the process by which children learn. It is everything that students and their teachers do and the materials with which they are done.

Swaziland is now undertaking a five-year *Second National Development Plan* designed to continue the process of development in the country. One aim of the plan is a revision of the primary school curriculum.

Purposes of the revision of the curriculum are as follows:

1. To improve the technical quality of primary education.
2. To make it more relevant to the culture.
3. To orient it more towards the rural environment.
4. To reflect national goals,
5. To improvethe foundation for secondary education.

This report contains a summary of a plan which has been developed to bring about the curriculum change in the schools. It is not a plan which changes just a few topics in the syllabus here and there, nor does it talk about just changing the number of years of primary education. It is much more comprehensive. *It has examined primary education as a whole.*

Some of the main areas considered, included:

how curriculum is now and should be designed and developed in the future,

how materials such as textbooks teachers guides, visual aids, concrete object for childrens' use, etc., are now being produced and distributed and how production and distribution can be improved,

how education is currently being delivered to the students, that is the teachers, their qualifications, their level of training, radio broadcasts, and whether other methods and means can be added to help teachers in their work, etc., and

how educational progress is being evaluated and what can be done to improve it.

The Minister of Education, in the Preface to the *National Primary School Curriculum Plan writes,* "We are confident thatt his plan will help prepare all the nation's children for a better life than they could have otherwise. It will give them skills which they can use immediately out of school and teach them to be good citizens who are loyal to their country and King, and will desire to see the nation progress. With the establishment of the Primary Curriculum Unit, we will have the capability for the first time of producing our own curriculum materials, which have been imported in the past and which are often irrelevant to our needs. It does all of these things, with a few exceptions, by building on existing infrastructure and utilising existing personnel. The plan will produce a much more efficient education without increasing costs in any substantial way".

A few quotations from the *Second National Development Plan* show the high priority Government has given to primary school curriculum development:

> "Government recognises that primary education is the foundation upon which most further development of our human resource is based (Page 153)";
>
> "The three major aims of expanding enrolments, improving quality, and changing the orientation of curricula are closely interrelated, and there is no doubt at this time that the number of children who benefit from primary education can be increased considerably. (Page 153)".
>
> "Government believes that priority over the Plan period should be given to tackling these problems of low quality at primary level. This is not only because better primary education is an absolute prerequisitite for raising the standards of other parts of the educational system, but also because improvements in quality will themselves be conducive to expanded primary school enrolments (Page 157)".
>
> "... a widespread and fundamental reform of the primary curriculum will be instituted. Not only will the content of existing subjects be made more appropriate to the local situation, but a programme will be developed for the introduction of teaching in agriculture and other rural skills into all primary schools within a few years on the basis of well defined and practical syllabuses. Funds will be made available to construct and equip as many school gardens and simple workshops as possible and new programmes will be developed for the training of primary school teachers in these subjects. The new curriculum will be terminal in nature and will contain a strong rural bias".

OVERVIEW

Although a full understanding of the *National Primary School Curriculum Plan* is not possible without detailed study of the plan itself, the following overview of the eight-year plan gives a broad picture. To begin with the following *products* can be identified:

1. *A curriculum co-ordination and decision-making system will be established.* Suggested changes in the curriculum will require review and approval by professionals and policy-makers to ensure that they are desirable and relevant to the aims of national development. Also, as there are many bodies involved in primary curriculum (for example, subject panels, teacher training colleges, in-service teacher training programmes) ways of co-ordinating all of these on going activities need to be evolved to ensure that everyone is working together, that efforts are not duplicated and money is not wasted.

2. *Education aims for primary school will be formulated.* Without specific aims, any curriculum change may not support national development goals. It is important that everyone knows where we are aiming, and these aims must be specific and clear. Three levels of aims can be identified in this respect. The *general national goals* aimed at the upliftment of the rural population, the *expected outcomes* (which are a breakdown of the general goals into more observable terms) and the *specific objectives* which will be followed in the day-to-day teaching. Every aspect of the curriculum will be designed in such a way that the focus of learning will start from the environment.

3. *The Primary Curriculum Unit (PCU).* The PCU was established in 1974; one of the most important parts of the new plan must be the design and preparation of materials. The PCU will provide this capability. Decisions affecting the organization of learning experiences are too complex to be left to the entire judgement of individual teachers at the moment of teaching. The psychological state of development of the child will have to be considered. The structure and sequencing aspects of the subject must be considered and the relationship of these to specific objectives, outcomes and broad national aims will have to be co-ordinated. Evaluation of the curriculum, not only of the materials, but student progress, teacher use, etc., must be done. Educational problems will need to be diagnosed and remedies suggested. The PCU will have the capabilities to carry out these functions.

The PCU will eventually have from 25-30 staff members including:

curriculum design specialists,
evaluation specialists,
teacher training specialists (both pre-service and in-service)
printing production and distribution specialists, and
teacher leaders for the District Teaching and Innovation Distribution Centres (TIDC's) and see below.

4. *Local curriculum development specialists for the unit will be trained.* One of the main aims of the plan is to train local personnel to serve all needs of the PCU. This is essential for continuation of the system as well as for short-term success. Training, unfortunately, is often neglected or given insufficient emphasis in plans like this one, partly because of pressure for immediate project impact.

5. *New buildings will be completed.* The PCU is to have a new building located in Manzini at the William Pitcher College. It will be well placed to serve as the centre for curriculum development as it will be able to use the staff resources of the teacher training colleges. The building will include offices, workrooms, storage space, a printing facility, a classroom and library, a recording studio, etc. Further, new Teaching Innovation and Distribution Centres will be built in each district (Manzini, at the PCU; Pigg's Peak, Siteki; and Nhlangano). Money for these buildings is being loaned to Swaziland by the World Bank.

6. *New Teaching Innovation and Distribution Centres will be established.* Introducing new curricula will succeed only if it meets teachers' needs and if teachers are closely involved in its development. These centres will provide current information to the PCU and to teachers on the success of the curriculum. These centres will also provide for continuous training for teachers, and a place to change materials to fit local conditions. As the title implies, they will also serve as centres for the distribution of school materials. Staff of the centres will comprise a cadre of teacher leaders belonging to the PCU but supervised by District Education Officers and Primary Inspectors.

7. *An evaluation and progress reporting system will be established.* Many new ways will be introduced to evaluate all parts of the programme, including continuous assessment of student progress. This does not mean that the SPC examination will be replaced. How well teachers use new materials will be evaluated, and how well materials are distributed in a timely fashion to the teachers and students will be evaluated. Much of the evaluation information will be reported and kept centrally at the PCU so that progress can be evaluated and improvements can be made where required.

8. *New local materials will be produced and distributed.* After new materials (perhaps even some textbooks) have been designed and prepared, they must be produced in quantities large enough to be distributed to all schools. At first, production of this type will be contracted out to private printers in Swaziland, and possibly out of the country where needed. Eventually, all production may be done within Swaziland. Inadequate distribution of materials can cause the failure of any curriculum reform, regardless of the quality of the materials themselves. New materials will be distributed from the PCU to the Teaching Innovation and Distribution Centres. From these centres the teachers and headmasters will receive their supplies.

9. *Teacher training programmes will be co-ordinated and new programmes established.* Both pre-service and in-service training of teachers are essential parts of any curriculum development effort. Teachers are the ultimate implementors of the curriculum, and any curriculum reform will fail if teachers are not well trained in the content and methods of the new curriculum and its associated materials. Teachers must be involved in the development process from the beginning, not only to make full use of their teaching experience, but also to ensure that they will identify themselves as having contributed to the development of the new programme. Work of the PCU will be fully co-ordinated with the programmes of the teacher training colleges, and the primary school In-Service Training Programme funded by UNESCO and ODA.

10. *Curriculum library facilities will be established.* Libraries will be established at the PCU and at the Teaching Innovation and Distribution Centres. Given a sufficient resource library, curriculum development specialists and teachers in the field can have access to many current educa-

from the *Second National Development Plan*. In the early years of the project, there will be six technical advisors, but these will be reduced to two at the end of the project. The technical advisors will not only include curriculum specialists, but specialists in printing and publishing and teacher training as well. Training is planned so that all skilled work initially provided by technical advisors will eventually be done by trained and qualified local educators. The technical advisors will not occupy established posts as is the usual practice. All posts in the new institutions will be occupied by Swazis from the beginning, and technical advisors will be assigned, according to their expertise, to train specific Swazi personnel on-the-job. Also, there will be formal training for project staff, including special courses, or internships, at curriculum centres in other countries (including African countries), and some staff will be sent overseas for second degrees at appropriate institutions of higher learning.

2. *The new curriculum will be designed with the best modern educational methods*. Educational research in recent years has thrown new light onto learning and the way learning experiences should be organised. Also, there have been developments in evaluation techniques. The best of these approaches which are suitable to local conditions will be introduced. Specifically these are:

> *looking at all the parts of learning as a complete whole*, e.g. clarifying educational aims, development of ways to reach these aims, identifying everything which will be required (teachers' guides, student materials — both reading materials and concrete objects, visual aids, evaluation instruments, etc.), making sure that all these materials are produced, and distributed to the teachers on a timely basis and that teachers know how to use them, and that everything is evaluated (including the production and distribution systems, whether teachers can use materials, etc.).
>
> *clearly defining educational outcomes*. This has already begun with broad outcomes related to national development. It will conclude with more specific teaching objectives and evaluation instruments which can be used by teachers and by the Ministry of Education to evaluate and revise the methods and materials,
>
> *introducing more frequent evaluation and revision of curriculum materials*. Student and teacher progress will be followed continuously. This will allow the new system to be under constant review, e.g. the effectiveness of new materials, methods, equipment, etc., will be constantly examined so that success can be effectively evaluated and needed changes made,
>
> *focusing on student practice as well as teacher presentation methods*. Research in learning has lead to an increasingly influential distinction between conventional methods of teaching which focus attention on presentation methods and new approaches to instruction which focus on learner performance. Research contrasting these methods suggests that efforts to focus on the amounts and kinds of student practice needed for complete mastery are far more effective and efficient than solutions which stress presentation of material. As much as is practical, correct student practice will be continually evaluated and students will progress from one learning experience to another, dependent upon learning mastery.
>
> *using special equipment*. Problems with equipment maintenance, absence of rural electrical power sources, unreliability of battery-powered equipment, and general dissatisfaction with equipment-based educational approaches, even in developed countries, make any equipment-based programme a high risk. Within limits, however, there will be some use of equipment. For example, educational radio is currently being used at the primary level. This will be expanded as it fits in with methods which will be introduced. Inexpensive, battery-powered tape casettes with recorded materials will also be considered. Also, use of the new central computer is being considered for processing examination results, reporting on success of the new curriculum, and collecting information about student progress.

3. *Character building, motivation and attitude development will become more important part of the curriculum than in the past*. Everyone realizes that many of Swaziland's educational problems, as well as any other country's, are not those dealing with the training of the mind but are those dealing with developing good attitudes and forming good character. National growth depends heavily upon the efforts of its citizens. Many of these kinds of aims are found in any culture (e.g. perserverance, patriotism, self-reliance and a psychological orientation towards the environment). In the more traditional curriculum, such aims are not explicitly taught in classrooms, nor are they tested as part of the examination system. As a result, they are aims which are not sufficiently developed at the end of formal schooling.

Including aims such as these, as an explicit part of the curriculum, will be new to education in Swaziland.

4. *Thinking skills will receive more emphasis*. Nearly everyone realises that there is too much emphasis on recall of information in the schools which, by itself, often is not transferrable to the practical world. The new curriculum will emphasise conceptual learning, problem analysis skills and problem solving skills consistent with the child's developmental capacity for handling such skills, which will enable him to deal more effectively with his environment or other environments into which he may be introduced.

5. *Integration of some subjects and organising the curriculum into smaller learning units*. The primary curriculum syllabus is currently organised by subjects within each instructional year. The revised curriculum will combine some of the subjects. Final decisions about how this will be done have not been made, but an example might be to combine music, art and craft, civics, etc. under a new heading called cultural studies. Also, the new curriculum will co-ordinate the skills and knowledges among the subjects; for example, maths and science will be structured and sequenced so that they fully complement one another. The revised curriculum will be divided into smaller instructional units requiring between five to fifteen hours of classroom time. Organizing the curriculum into these units (called modules) will have many advantages. It allows changes to be made in part of the curriculum without extensive modifications in the rest. It also simplifies evaluation of curricula by dividing complex and long material into simpler units. It will allow some materials to be developed that can be undertaken by

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children with minimum involvement of a teacher. It will allow various groups of children in the classroom to be doing different things at different times if the teacher so desires, thus conserving expensive materials and giving variety and spice to the learning situation. The concept of modules is not new in curriculum development. The actual use of modules is widespread in short courses and special training programmes and has proved an effective method of arranging curriculum materials for many different educational purposes.

No matter what form the learning experience takes, a module has the following characteristics:

an explanation of why the module is important/relevant,

an overview of what is to be learned,

a set of teaching objectives. These may be arranged by subject areas or from several subject areas (the integrated curriculum approach) and will also include objectives in character building and attitude formation, instructions to the teacher on how to administer and manage the learning situation,

student reading materials

visual aids. These will be simple and will not require any support not easily available to all schools,

concrete objects for student use,

evaluation measures and instructions to the teacher on how to administer them. Some paper-and-pencil tests will be used, but evaluation will often be done with easily used checklists for specific abilities or attitudes.

Most of the modular materials will be reuseable as soon as they are completed. They will be grouped into larger units of related modules. The final module in each unit will be a review of all materials therein. A comprehensive post-test is given at the end of the unit by the teacher and is her primary means to ensure each child's progress. Marks received from modules and units will be recorded and become the basis for continuous assessment evaluation. Since the evaluation instruments (tests, check-lists, etc.) will be the same for all schools, it will help to ensure that the same standard of evaluation is used in all schools.

6. *Teacher training and involvement.* Traditional school systems make little organized attempt to reach primary school teachers in their classroom and often do not give them adequate supplies of new materials. Nor do they make available re-education programmes to help with the introduction of new materials. Additionally, there is often no reporting of student progress on a formal basis until the school leaving examination at the end of primary education. Under the plan a far-reaching training programme will re-educate teachers within their own schools and communities, distribute new materials and monitor use and success of these materials. The parts of this programme will include full co-ordination with the In-service Teacher Training Programme, the establishment of Teaching Innovation and Distribution Centres in each district with a cadre of school inspectors and teacher-leaders, and a progress reporting system. The idea will be to strengthen every existing teacher and officer in his post and to train him in the new methods rather than to go around him or over his head. This approach has

rarely been incorporated in a systematic way into full-scale curriculum development projects.

COORDINATION WITH EXISTING PROGRAMMES

The plan has not been designed to replace any existing educational programme. Instead, it will coordinate, build and improve upon current programmes. Full co-ordination, for example, is planned with the following projects:

English Through Activity (British Council),
In-Service Teacher Training Programme UNESCO and ODM),
Schools' Agriculture Scheme (UNICEF), and
Schools' Agriculture Programme (ODM American Embassy, etc.).

ACCOMPLISHMENTS TO DATE

Several significant accomplishments have taken place during the initial 20 months of this project. These have established a firm foundation for the implementation phase which began in 1975. Major among these achievements are the following:

1. *The National Primary School Curriculum Plan. A National Primary School Curriculum Plan* has been formulated and adopted by the Ministry of Education. The Plan presents strategies and guidelines for: curriculum decision making; materials preparation, production, and distribution; pre-service and in-service teacher training; progress reporting and evaluation; and staff training. It also contains estimates of personnel and fiscal requirements for its implementation.

2. *The Primary Curriculum Unit.* The Ministry established a Primary Curriculum Unit (PCU) in January 1974. The PCU has been operational from the inception of the plan. The training of eight local professional counterparts has begun through a series of six on-site training workshops coordinated with formal and informal on-the-job training.

3. *USAID Technical Assistance* The Government of Swaziland has negotiated with USAID for technical and financial assistance, in the form of advisory personnel, commodities, and training, to implement the *National Primary School Curriculum Plan.* A Project Agreement, to formalize the details of this assistance, was signed in January, 1975. It will provide 36 man-years of technical advisory assistance over an eight-year period, related housing needs, equipment, commodities, and counterpart training.

4. *World Bank Assistance.* In co-ordination with USAID assistance, the Government of Swaziland has concluded negotiations with World Bank for a credit agreement to implement a programme of educational development. This agreement will provide buildings, furniture, and vehicles for the PCU, a materials production facility, and the four Teaching and Innovation Distribution Centres.

5. *Education Aims.* Primary school educational outcomes have been developed for both upper and lower primary grades and standards. The outcomes are stated as performance outcomes for students completing the programme, and reflect the knowledge, skills, and attitudes to be taught by the new curriculum.

6. *Counterpart Training.* An on-site training programme has begun for the PCU staff. It has emphasised curriculum development methodology and has developed skills which will enable the staff to plan and manage the interrelated supporting systems required to produce, distribute, implement, and evaluate the new curriculum.

7. *Programme Co-ordination.* Initial steps have been taken to co-ordinate the diverse curriculum programmes within Swaziland's primary school system. Progress has been made toward co-ordinating several programmes which previously have been relatively autonomous, thus avoiding duplication of effort, encouraging co-ordination of goals, and reducing conflict among various plans.

8. *Evaluation.* A rationale for curriculum evaluation has been adopted. Evaluation instruments are under development to establish a baseline of current student achievement for future evaluations and curriculum development.

9. *Materials Development.* Sample curriculum materials have been produced. These include several trial instructional Learning Units (modules), each with all essential components: specific instructional objectives; teaching methods; teacher guides; evaluation devices; visual aids; and student activity materials.

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But what is *Basic Education*? The Nairobi Seminar on Basic Education in Eastern Africa produced the following statement: "Basic Education is the minimum provision of knowledge, attitudes, values and experiences which should be made for every individual and which should be common to all. It should be aimed at enabling each individual to develop his or her own potentialities, creativity and a critical mind both for his or her own fulfilment and happiness and for serving as a useful citizen and producer for the development of the community to which he or she belongs."

I quote this and realise that this thought should be read together with some of the conclusions which that seminar reached:

(*a*) that no limit can be set on the duration of a Basic Education programme, and that it must draw on the social, cultural and physical environment that immediately surrounds the learner; those receiving Basic Education can belong to any age group at any stage of intellectual development and the content of their Education cannot be presented in a uniform manner;

(*b*) traditional social and cultural practices should be the anchor for such and Education;

(*c*) attitudes and values, the 'affective domain', should be given careful attention;

(*d*) the learner must be able, if he so wishes, to proceed to higher levels of learning;

(*e*) when certificates are given out, no distinction should be made between those who are in the formal school system and those who are receiving non-formal education.

This seminar has addressed itself to the critical areas of Teacher Education and Evaluation, to developing goal-oriented and rurally oriented education, to strategies for teaching attitudes and good character and that this seminar has also posed the questions:

(*a*) who should be involved in Curriculum Development for Basic Education and how should they be involved?

(*b*) How can we prepare all concerned groups for educational change?

(*c*) How can Curriculum Development best address the non-cognitive aims of education in Basic Education?

The teaching profession must play a very important role in developments. A total transformation of outlook and method is required here. Teachers have to comprehend new sets of objectives, they must evolve a new set of techniques that can give effect to new targets and of course it is needless to say that they must keep the actual system running.

Curriculum development is going to call for remarkable insight, dedication and application from teachers. There is no doubt that the success or failure of the attempt at transformation will, in large measure, be determined by the extent to the teaching profession can be inspired to a fanatical zeal for the kinds of change you have been discussing. This certainly implies a complete re-thinking of the status of the teaching profession in our societies. Teaching must be attractive to the finest minds in the society because only the finest are likely to evolve the techniques that are needed. The teaching profession must be attractive in the scale of professional remuneration and prestigious in the sense that the primacy of its role in the strategy of change is understood and recognised by all.

ADDRESS BY ALEX TOSH

UNESCO/UNICEF
Regional Advisor

After the opening address by the Hon. Dr P.S.P. Dlamini, Minister of Health and Education, the theme address was given by Mr Alex Tosh UNESCO/UNICEF Regional Advisor. Here is an extract from his address on "Curriculum Development for Basic Primary Education."

Curriculum Development for Basic Primary Education

BASIC EDUCATION — A MINIMUM PACKAGE?

PARTICIPANTS in the Basic Education Seminar in Nairobi in August, 1974 discussed in two groups and in two sessions the concept and content of basic education. They explored the possibility of designing a "minimum package", one group along the lines advocated in "New Paths to Learning" and the other more in light of on-going experimental planning in some countries of the Eastern African region. The composition of the "package" was suggested as follows: functional literacy and numeracy, positive attitudes, a scientific outlook, fundamental knowledge and skills for raising a family and operating a household, functional knowledge and skills for earning a living and for civic participation. Experiments elsewhere have used literacy and numeracy, citizenship, self-help and cultural activities and community studies as curriculum areas and various educators at different times have argued cases for environment studies, health, basic technological skills, home management, child rearing, political education, etc., etc.

However, the Basic Education Seminar came to certain conclusions about the content, the delivery systems and the processes of basic education which are so significant and definitive that they are reproduced here before an attempt is made to suggest a "model" for basic education which will serve to initiate discussion. They were:

"(*a*) the basic education cycle tends to be equated with the maximum period of education that a country's available resources permit; there can therefore be no global definition in terms of duration. Similarly there can be no specificity in terms of content since a basic education must draw upon local social, cultural and physical environments for its curriculum. Again there can be no universal methods of presentation or delivery since the clientele can belong to any age group at any stage of intellectual development, and the mediators in learning may be identified in professions and trades not traditionally associated with teaching. These factors indicate the need to first define basic education in terms of its aims, and subsequently to use considerable flexibility of methods, to combine general access and delivery, and to tap extensively the various educational resources of the community;

(*b*) attitudes and values and the development of the critical faculty should assume major importance in any programme to be followed so that the learner can face with confidence the unforeseen future;

(*c*) traditional socio-cultural practices should be the foundation upon which innovations are mounted;

(*d*) "ladders and bridges" must be established to enable the learner to proceed to all other levels and categories of educational opportunity;

(*e*) it is essential that alternative out-of-school or "hybrid" basic education systems should not acquire a second-best image in the eyes of the clientele;

(*f*) the "rewards", whether they be intangible or in the form of certificates, records, etc., should be the same, and should be seen to be the same for all systems-school, out-of-school or "hybrid."

A "model" for discussion

Taking account of all these factors, and in the belief that only a head-on attack upon the design of a curriculum model will elicit the much-needed debate among curriculum planners, the following suggestions are made:

There might be four curriculum areas:

(i) Language and Number
(ii) Citizenship
(iii) Ecology
(iv) Technology

Justification for this classification, other than the belief that it is comprehensive, and some definition of the areas are as follows:

(i) **Language and Number** are the essential media for communication, without which there can be only limited progress. Basic functional literacy should bring with it the ability to read a newspaper, follow simple instructions and to write a simple personal or business letter.

Numeracy is the ability to use the four operations of basic arithmetic in the set of real numbers and to apply this capability to the transactions of everyday life and non-specialist work. It includes also a familiarity with the basic shapes of geometry and some awareness of pattern.

(ii) **Citizenship**. Education in civics, the awakening of political consciousness and the development of democratic virtues and responsibilities enable people to understand the structures of the world they have to live in and to carry out their real tasks in life. The essential thing in citizenship is not the more or less subtle or the more or less excessive form it may assume, but for the educational action to be linked to the just, efficient and democratic use of power.

Citizenship, or political education, should not be confused with ideological indoctrination, but as contributory to awakening civic spirit and a sense of societal commitment, to arousing interest in, and empathy with, others and assisting people to escape isolation.

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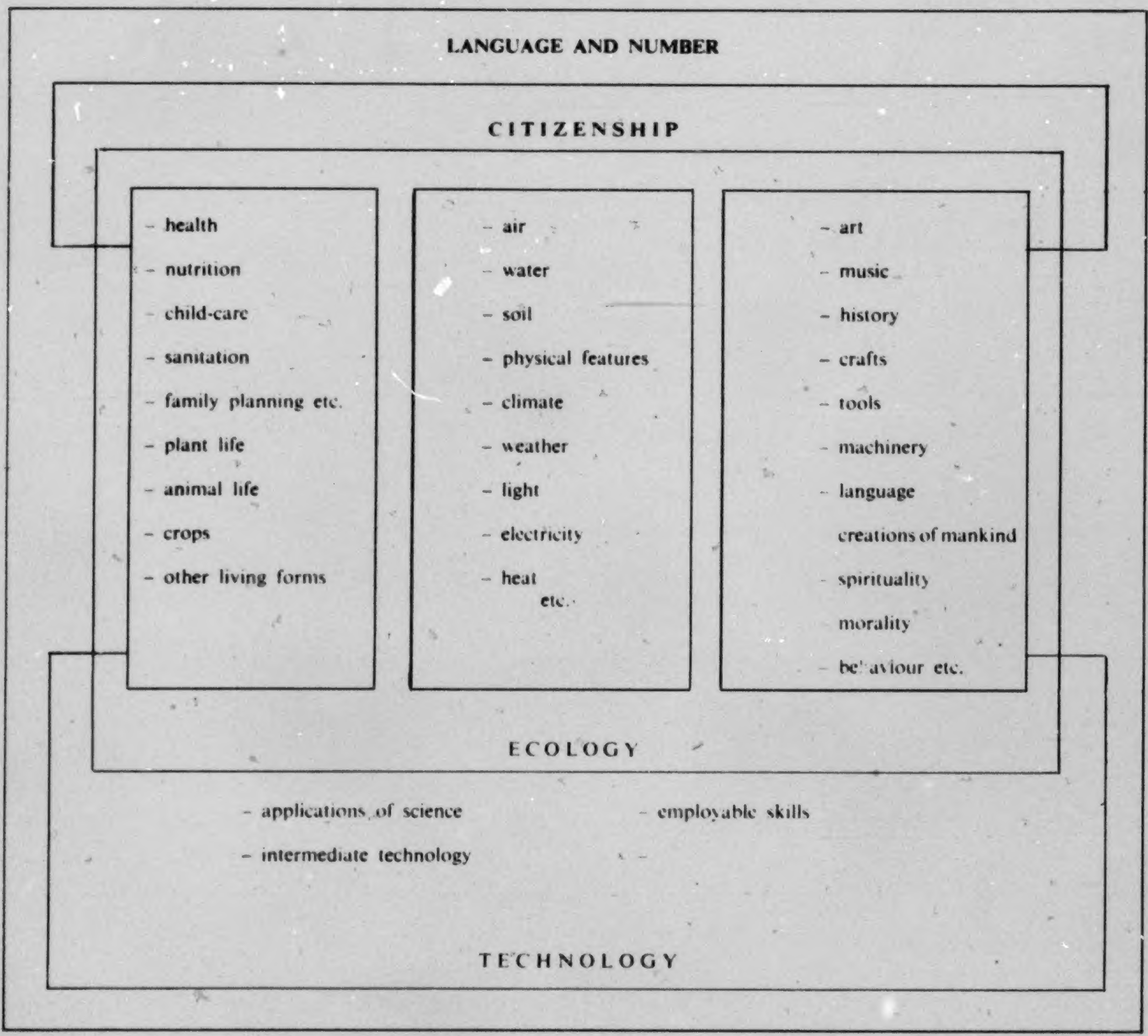

figure 1

(iii) **Ecology.** The word is used (with some licence) to signify the mutual relations between human beings and their total environment. It is chosen in this context because it is comprehensive; it could, in fact, be used to embrace also literacy, numeracy, citizenship and technology — but they are excluded because of their special significance. The environment is an infinite concept, so it is not surprising that it can be classified in many ways — in terms of concepts, or of processes, or of problems, or of knowledge, or of relations, and so on. A simple classification, the "ABC" of ecology is contained in "The Total Environment Approach to Learning" by William R. Eblen: A — the abiotic, or non-living components (i.e. air, rock, water, etc.); B — the biotic, living or once-living elements (plants, animals, wool, wood, etc.); C — the cultural or man-created components (machinery, art, music, etc.). This is an interesting classification which transcends traditional subject boundaries and permits flexibility within the basic education curriculum. It is a classification which demands that subject specializations respond to all aspects of the total environment.

(iv) **Technology** in basic education is seen as a "bridge" leading to vocational training proper — that is, training basically aimed at enabling those for whom it is intended to acquire the necessary information and skills in a particular sector of economic activity. In the rural world this means all rural occupations and, in particular, agriculture. Technology in basic education is to furnish the citizen with desirable attitudes to work and his society, who finds satisfaction in the service of his society through his chosen work, and who has sufficient knowledge and understanding to adapt, renew or acquire his skills, manual and intellectual to whatever circumstances obtain in his community at any particular time.

The inter-relationships between curricular areas is illustrated in figure 1.

The model suggests only the content of basic education within cognitive and psycho-motor domains — knowledge, understandings and skills. However, it could well be that the acquisition of desirable attitudes and values is at least as important in basic education. Each curriculum area has its own contribution to make to this affective domain. The choice of materials and learning experiences, the manner of presentation, the learning situations, the selection and training of mediators in learning — all these are matters of fundamental relevance to the acquisition of attitudes and values. It can be argued that the best way of ensuring an integrated curriculum and the promotion of desirable attitudes and values is for the learners to have direct involvement, and responsibilities to discharge, in the development projects of their societies. This changes the emphasis from "learning about" to "participating in" and effectively links basic education to life.

Perhaps in at least curriculum areas 2, 3 and 4 of the model suggested above, the approach most likely to achieve the flexibility necessary for participation will be the "topic" or "module" approaches, which take as centres of interest the development projects of their societies. Proponents of this approach often see its adoption in terms of the whole school curriculum, but perhaps it is best suited to curriculum areas 2 and 3.

And to meet the needs of the variety of *clienteles* for basic education the definition of curriculum in terms of instructional objectives seems to offer the opportunity to involve learners more effectively, to utilize mediators in learning from outside the ranks of professional teachers (parents, craftsmen, peers, auxiliaries of all kinds). It seems that certain curriculum areas lend themselves very well to this approach and perhaps the most useful thing for curriculum workers in basic education to do would be to identify those areas and prepare "objectives" and "banks of objectives". In this connection, the ILO, UNESCO and UNICEF are co-operating with governments of the region in preparing modules of technology for basic education. This experiment is in its infancy and now would be an appropriate time for further experimentation in the Eastern African Region with "units" for Ecology at least. In all such endeavours, behaviourist theory and techniques presently being developed for distance learning, for personalized instruction, for self-instruction etc. should be fully explored and exploited.

Conclusion

This paper has sought to indicate the critical contemporary issues in education and the part which could be played by curriculum planners in confronting those issues. While there is much in the traditional theories and practice of curriculum development which are not applicable to the crisis situations of today and the future world, yet their many sound principles and techniques (some of which may need adaptation and modification) can, and will, serve as the basis for future actions.

It seems that, today, most countries hope to include in educational objectives the element of participation in, and contribution to, the development process. This immediately identifies the learning experience or, at least, indicates that the choice of learning experiences is no longer wholly the province of the curriculum developer. The learning experiences emerge from each local situation and civic leaders, parents, sectorial development agencies will all have a say. A new relationship is called for between the curriculum worker and the community. But the educator still occupies an important position because, with his greater knowledge and wider vision he can link the practical, functional learning experiences to others which will serve to develop not only functionality but the essential human personality and spirit of the learner. In this he must exercise eternal vigilance. Education is not confined to acquisition of knowledge and skills to meet survival requirements, but with "the complete fulfilment of man, in all the richness of his personality, the complexity of his form of expression and his various commitments — as an individual, member of a family and a community, citizen, producer, inventor of techniques and creative dreamer." (Director-General ,UNESCO 1975.)

The responsibility for the curriculum planners is therefore not diminished in that he also must be part of the development process and work in total harmony with other agents of change. And his skills in classifying content (whether or not in terms of behavioural objectives) will be exercised even more extensively for a new range of *clienteles* for basic education and to facilitate assessment and evaluation. The classical cycle of curriculum development is still valid Its renewal and adaptation is the challenge facing curriculum workers in this decade.